2025 APVRS & PAO Joint Annual Congress

The 18th Congress of the **Asia Pacific Vitreo-Retina Society**
in conjunction with the **Philippine Academy of Ophthalmology Annual Congress**

RETINA 360: Learning, Application, Transformation, Synergy

ABSTRACT BOOK

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FREE PAPERS

APVRS

Intraocular Inflammation, Uveitis & Scleritis

Abstract No.: 200123
Chorioretinitis in Chikungunya Virus (CHIKV) Infection: First Documented Case and Its Lasting Clinical Significance
*First Author: Bhuvan **CHANANA***

Purpose: To present the first reported case of chorioretinitis associated with CHIKV infection, published in 2007, and to emphasize its pivotal role in recognizing posterior segment manifestations of emerging arboviral diseases.

Methods: A retrospective clinical analysis of a 16-year-old male who developed bilateral macular chorioretinitis two months after a confirmed chikungunya fever. Multimodal imaging, including fundus fluorescein angiography and optical coherence tomography (OCT), was performed. The serological confirmation of recent CHIKV infection was obtained. The patient was managed with systemic corticosteroids and followed over a six-week period.

Results: The fundus examination revealed bilateral macular lesions with chorioretinal inflammation. The imaging demonstrated early hypofluorescence with late staining on angiography and outer retinal layer disruption on OCT. Systemic corticosteroid therapy resulted in resolution of inflammation and improvement in visual acuity, although some structural retinal changes and field defects persisted. This case is the first in the literature to clearly characterize macular chorioretinitis as a manifestation of CHIKV.

Conclusions: This seminal case, published in 2007, was the first to document chorioretinitis secondary to CHIKV infection. It significantly expanded the ophthalmic spectrum of CHIKV and laid the groundwork for future investigations. As arboviral epidemics re-emerge globally, early identification of ocular involvement is crucial. This case remains a landmark contribution to the literature on infectious uveitis and deserves renewed global recognition.

Abstract No.: 200330
Diagnostic Test Accuracy of Teleretinal Screening for Cytomegalovirus Retinitis (CMVR) Among People Living With Human Immunodeficiency Virus (PLHIV): A Systematic Review and Meta-Analysis
*First Author: Matthew **VILLANUEVA***
*Co-Author(s): Albert **BROMEO**, John Mark **DE LEON**, Nilo **FLORCRUZ**, Leandrea **NOLLORA**, Holijah **UY***

Purpose: To determine the accuracy of teleretinal screening for CMVR in PLHIV.

Methods: We wrote this review following the Preferred Reporting Items for a Systematic Review and Meta-analysis of Diagnostic Test Accuracy (PRISMA-DTA) guidelines. The study protocol was registered under PROSPERO (CRD420250637110). We searched the following databases: Cochrane Library, PubMed, CINAHL, Scopus, and Web of Science. Two reviewers extracted data and assessed methodological quality against QUADAS-2 criteria. The sensitivity and specificity values were pooled using the hierarchical summary receiver operating characteristics (HSROC) model, and heterogeneity was visually examined using SROC plots and forest plots. The quality of evidence was assessed using the Grading of Recommendations Assessment, Development and Evaluation.

Results: We included five eligible studies with a total of 1460 eyes of PLHIV. The meta-analysis revealed a pooled sensitivity of 87.11% (95% confidence interval [CI]: 50.35-100%; low-certainty evidence) and a pooled specificity of 97.73% (95%CI: 89.88-100%; high-certainty evidence). For the subgroup analyses, high-

income countries have higher sensitivity and specificity, compared to low- and middle-income countries. The CD4 cell count threshold of <50 cells/mm3 has higher sensitivity compared to thresholds of <100 and <200 cells/mm3. Fundus imaging modality using ultra-widefield imaging has higher sensitivity and specificity compared to single-field and multifield composite imaging. Sensitivity analysis did not show any variations after omitting one study with a high risk of bias.

Conclusions: This review provides evidence of the high diagnostic accuracy of teleretinal screening for CMVR among PLHIV. It recommends integrating teleretinal screening into HIV care where ophthalmologist access is limited.

Abstract No.: 200533
Evaluation of the Role of Interleukin-6 and Vascular Endothelial Growth Factor (VEGF) in Uveitic Macular Edema (UME) and Uveitis

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Purpose: To evaluate the relative importance of interleukin-6 and VEGF in the pathogenesis of UME and uveitis.

Methods: The phase 1 DOVETAIL trial (NCT06771271) evaluated intravitreal vamikibart, a novel interleukin-6 monoclonal antibody for the treatment of UME in patients with noninfectious uveitis. Aqueous humor (AH) was sampled at baseline and other follow-ups to assess interleukin-6 and VEGF concentrations along with serum interleukin-6 levels.

Results: In DOVETAIL, baseline AH in patients with UME showed higher interleukin-6 levels (n = 37, median: 122.0 pg/mL) than VEGF levels (n = 12, median: 44.8 pg/mL). The median interleukin-6 levels were higher in AH compared with serum (n = 37, 122.0 vs. 3.8 pg/mL), suggesting local ocular interleukin-6 production. AH interleukin-6 levels were similar regardless of uveitis disease activity (inactive: n = 12, median: 38.6 pg/mL; minimally active: n = 11, median: 167.0 pg/mL; active: n = 14, median: 131.5 pg/mL) and were elevated in all anatomical types of uveitis (anterior: n = 11, median: 167.0 pg/mL; intermediate: n = 5, median: 13.5 pg/mL; posterior: n = 5, median: 99.3 pg/mL; panuveitis: n = 16, median: 146.5 pg/mL) compared with controls (cataract patients; n = 50, median: 1.3 pg/mL). For all investigated intravitreal doses of vamikibart, rapid and sustained AH-free interleukin-6 suppression was observed, with no change in AH-free VEGF.

Conclusions: Our findings and the positive efficacy evaluation in DOVETAIL suggest that interleukin-6 is a key pathogenic driver in patients with UME and uveitis, whereas the role of VEGF in this setting appears less prominent. This contrasts with other retinal vascular diseases where anti-VEGF therapy is the standard of care. These results may explain the limited efficacy of anti-VEGF agents in managing UME, as observed in the MERIT (NCT02623426) and PROMETHEUS (NCT01846299) trials.

Abstract No.: 200208
Five Decades of Endophthalmitis Research Publications in India: A Bibliometrics Analysis

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Purpose: To analyze the publications on endophthalmitis in India in the past 50 years.

Methods: The study employed a rigorous bibliometric approach that included: 1) a comprehensive literature search using the Preferred Reporting Items for Systematic reviews and Meta-Analysis (PRISMA) guidelines, 2) a search of Scopus and PubMed database using endophthalmitis-relevant key Medical Subject Headings (MeSH) words, and 3) utilizing the VOSviewer software for further structural analysis. The documents included clinical science and review articles. The articles describing the differential diagnosis/ masquerade, toxic anterior segment syndrome

(TASS), panophthalmitis, and lens-induced uveitis were excluded. The search spanned from 1973 (the year of the first publication) to December 31, 2024.

Results: We sourced 1859 articles, and 540 articles met the inclusion criteria. This represents only 10.6% of global publications on endophthalmitis. More reports were clinical studies (35.8%; n = 191) and postoperative endophthalmitis (34.3%; n = 185). There were a few animal studies (1.85%; n = 10) and even fewer randomized clinical trials (1.1%; n = 6). Most publications originated from five large eye care facilities, and there was a good level of collaboration among the investigators. Eight authors have published over 20 articles, and four have published 50 or more. Six publications from India have been cited more than 100 times since their publication.

Conclusions: The publication and reporting spirit in India is a recent and welcome phenomenon, but it is far from inclusive. Ophthalmologists and vision scientists in India are required to publish region-specific endophthalmitis trends.

Abstract No.: 200284
Interleukin-6 (IL-6) Inhibition With Vamikibart in Patients With Uveitic Macular Edema (UME): Data From Phase 3 MEERKAT and SANDCAT Trials

*First Author: Yew Sen **YUEN***
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Purpose: Vamikibart is a recombinant monoclonal anti-IL-6 antibody engineered for intravitreal (IVT) delivery. Two global, randomized, double-masked, sham comparator–controlled phase 3 trials, MEERKAT (study GR44277, NCT05642312) and SANDCAT (study GR44278, NCT05642325), are investigating the efficacy, safety, and pharmacokinetics/pharmacodynamics of IVT vamikibart in UME secondary to non-infectious uveitis (NIU).

Methods: Patients (n = 225 per study) with UME and best-corrected visual acuity (BCVA) scores of 73–19 Early Treatment of Diabetic Retinopathy Study (ETDRS) letters, with active/inactive and acute/chronic NIU, are randomized into three arms: vamikibart 0.25 mg, vamikibart 1 mg, and sham. Study treatment is administered four times every four weeks through week 12, followed by as-needed dosing during weeks 20–48. Predefined rescue criteria allow for standard-of-care treatment for worsening BCVA, UME, or inflammation. The primary endpoint is the proportion of patients with a ≥15 letter BCVA improvement from baseline at week 16. Secondary endpoints include changes in BCVA and central subfield thickness, rescue medication requirements, adverse events, and IL-6 and vamikibart concentrations in aqueous humor and serum.

Results: At the time of abstract submission, the trials are ongoing. By the time of the proposed APVRS presentation, primary endpoint data at week 16, along with key secondary endpoints, will be available and presented.

Conclusions: MEERKAT and SANDCAT will evaluate vamikibart's potential to address the unmet need for effective non-corticosteroid treatments in UME. Primary efficacy and safety data presented from these trials are expected to provide insights into vamikibart's potential role in UME.

Abstract No.: 201392
Pathophysiology of Faricimab-Induced Occlusive Retinal Vasculitis

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Purpose: To describe clinicopathological findings of severe bilateral intraocular inflammation following intravitreal faricimab injection in a patient with neovascular age-related macular degeneration (nAMD).

Methods: Clinical records from March to November 2024 were reviewed for a patient with faricimab-associated uveitis. Data included demographics, clinical images, and treatment course. An undiluted vitreous sample from the left eye underwent proteomic analysis

using data-independent acquisition on the Bruker timsTOF Ultra platform coupled with NanoElute 2 chromatography. Vitreous from an epiretinal membrane case served as control. Proteomic data were analyzed via Spectronaut v19.1 and the Human Proteome Database. A diluted vitreous sample also underwent cytopathological evaluation.

Results: An 80-year-old female with bilateral nAMD developed blurry vision and ocular pain after receiving bilateral faricimab injections on different days from separate lots. Visual acuity dropped to counting fingers (right eye) and hand motion (left eye), with intraocular pressure elevated to 48 and 49 mmHg. Slit-lamp exam showed diffuse mutton-fat keratic precipitates. Angiography revealed optic disc leakage and bilateral hemorrhagic occlusive vasculitis. Inflammation improved after systemic corticosteroids and vitrectomy. Cytopathology showed chronic inflammation with T lymphocytes and histiocytes. Proteomics revealed elevated immune complexes and enrichment of adaptive and B-cell-mediated immunity.

Conclusions: This case highlights a rare but severe inflammatory complication of intravitreal faricimab. In addition, the index case, employing cytopathology and proteomic analysis of vitreous, suggested for the first time in the literature, a mechanism involving T-cell/macrophage activity, possibly type IV hypersensitivity, along with B-cell involvement, with immune complex deposition, as the underlying cause of this rare but potentially sight-threatening complication.

Abstract No.: 200611
Risk of Recurrent Disease in Patients With Vitreoretinal Lymphoma (VRL) Without Central Nervous System (CNS) Involvement: A Systematic Review and Meta-Analysis

First Author: Douglas ***PULA***
Co-Author(s): John ***GONZALES****, Travis* ***PORCO****, Thananop* ***POTHIKAMJORN****, Fanxiu* ***XIONG***

Purpose: To evaluate progression-free survival (PFS) and identify risk factors for recurrent disease in patients with VRL without CNS involvement.

Methods: A systematic literature search was conducted across four databases from inception through March 15, 2024. Studies reporting hazard ratios and time to recurrence in VRL patients without CNS involvement were included. This review was registered in PROSPERO (CRD42024518099). Survival analyses and subgroup comparisons were performed by treatment modality. Accelerated failure time (AFT) and Cox proportional hazards models were used to assess associations between baseline characteristics, treatment modalities, and recurrence risk.

Results: A total of 179 patients from 50 studies were included; 132 had complete individual-level data. The mean age was 65.1 years (standard deviation [SD] 10.6), with 28.7% female. The five-year PFS rate was 20.9% (95% confidence interval [CI]: 11.8–37.3) with a median time to recurrence was 31 months (95% CI: 26–49). Patients receiving intravitreal chemotherapy demonstrated a median time to recurrence was 38 months (95% CI: 26–not estimable). However, intravitreal chemotherapy was not significantly associated with improved time to recurrence in the AFT model (coefficient = 0.430, P = 0.16). No significant differences in recurrence risk were observed across treatment modalities, including intrathecal chemotherapy, systemic chemotherapy, and whole-brain radiation.

Conclusions: VRL without CNS involvement demonstrates poor PFS, with only 20.9% of patients remaining disease-free after five years. Despite multimodal therapy approaches, no treatment modality showed significant superiority in prevent recurrence. Further prospective studies are needed to clarify optimal treatment strategies and improve patient survival.

Abstract No.: 200522
Tattoo-Associated Uveitis

*First Author: Xuchuan **WANG***

Purpose: This paper elaborates on the clinical features of tattoo-related uveitis by presenting a well-documented case, analyzes the pathogenesis of this disease based on the tattoo history, and describes the treatment process.

Methods: Multiple tattoos were noted on the patient's body, with discoloration, stiffness, redness, unevenness, and slight skin damage on the left upper arm where a tattoo had been removed by laser six months prior . Five days after the laser removal, the patient developed decreased vision, eye redness, and photophobia in both eyes

Results: In this case, the patient developed eye symptoms two weeks after laser tattoo removal. When a laser is used to remove tattoos, it can break down pigment particles into smaller sizes, making them more easily captured by lymphocytes and triggering an immune response. At the same time, lasers can also cause damage to normal skin tissue, leading to an inflammatory response and activating the immune function. Generally speaking, local and systemic use of corticosteroids or immunosuppressants can treat patients of this kind. During the treatment, the ocular and skin symptoms often improve simultaneously. The patient in this case conforms to this situation.

Conclusions: Both tattooing and laser tattoo removal can cause panuveitis, but the mechanism remains to be further studied. With the popularity of tattoo culture, more cases of tattoo-related uveitis will emerge. All cases of uveitis with unknown causes should undergo inquiries and examinations regarding tattoos.

Abstract No.: 201276
The Endogenous Endophthalmitis Vitrectomy Study (EEVS): A Retrospective Analysis

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Purpose: To evaluate visual and clinical outcomes in patients with endogenous endophthalmitis (EnE) undergoing early pars plana vitrectomy (PPV) versus intravitreal antibiotics and biopsy alone (IOAB).

Methods: This retrospective study was conducted at a tertiary eye care center in North India. Records of patients diagnosed with EnE from January 2018 to June 2025 were reviewed. Inclusion criteria included clinical features of EnE with or without positive vitreous, blood, or urine cultures. A total of 51 eyes were grouped into Group A (IOAB alone, n = 13) and Group B (PPV with IOAB, n = 38). Visual and clinical outcomes were analyzed.

Results: The mean symptom duration was 11.6 ± 17.4 days; the mean follow-up was 17.9 ± 7.5 months. Systemic illness was present in 65.9%, and 46.3% had received prior intravenous fluids. Aspergillus (23.1%) was the most commonly identified organism, followed by Pseudomonas species (15.4%). Repeat intravitreal injections were required in 50% of Group A versus 21% of Group B. Although not statistically significant, Group B showed better visual improvement, especially in eyes with poor initial visual acuity (<20/200) and symptom duration ≤1 week — 55% of whom improved to >20/60. In contrast, Group A showed limited recovery, with 77% of eyes remaining <20/200.

Conclusions: Early surgical intervention may enhance visual outcomes in endogenous endophthalmitis, particularly in cases with poor baseline vision and short symptom duration. While statistically insignificant, our findings parallel the EEVS study, which demonstrated the visual benefit of PPV in postoperative endophthalmitis. Larger studies are needed to establish standardized EEVS-like treatment protocols for EnE.

Abstract No.: 200436
Time Matters: Visual Outcome Improves With Duration of Immune Recovery Uveitis

First Author: Ida Ayu Ary ***PRAMITA***
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Purpose: This study investigates the association between the duration from cytomegalovirus (CMV) retinitis resolution to immune recovery uveitis (IRU) onset and visual outcomes, while characterizing the clinical spectrum and therapeutic responses of IRU.

Methods: A five-year retrospective descriptive study was conducted based on the secondary data of human immunodeficiency virus (HIV) / acquired immunodeficiency syndrome (AIDS) patients in Bali, Indonesia. Patients with a history of healed CMV retinitis who developed IRU were collected for their clinical data, including demographics, CD4+ cell counts, systemic antiretroviral therapy (ART) regimens, ocular findings, treatment modalities, and visual outcomes.

Results: A total of 13 patients (19 eyes) met the inclusion criteria. Manifestation of IRU predominantly manifested as vitritis (58.0%), anterior uveitis (26.3%), and panuveitis (15.7%). The median time from ART initiation to IRU development was 365 days. The median CD4+ cell count at IRU onset was 132 cells/microliter. Most patients (53.8%) presented with unilateral involvement. All patients received topical corticosteroids and showed a significant visual acuity improvement in 68.4% of cases (P = 0.000). Visual improvement was more frequently observed in patients with IRU onset within 36 days of CMV retinitis resolution (100%), compared to those with later onset (50%, P = 0.044). A positive association between duration to IRU onset and visual improvement was also identified using Spearman correlation (P = 0.519, P = 0.044).

Conclusions: Early-onset IRU following CMV retinitis appears to be associated with better visual outcomes, potentially reflecting a more responsive inflammatory phase and reduced structural damage. Prompt recognition and timely corticosteroid therapy remain essential for preserving vision in IRU patients.

Ocular Imaging

Abstract No.: 200887
3D Vasculature-Tissue Spatial Configuration Analysis of Posterior Ocular Surface Morphology's Effect on Choroidal Blood Flow

First Author: Zheng ***YUPING***
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Purpose: Using swept-source optical coherence tomography angiography (SSOCTA) volumetric data, reconstruct a 3-dimensional (3D) integrated model of the posterior ocular surface and choroidal vasculature to analyze the impact of posterior ocular surface morphological alterations on choroidal blood flow.

Methods: A cross-sectional study of 103 eyes (20 emmetropic, 20 low, 20 moderate, and 20 high myopia, plus 23 pathological myopia) underwent macular-centered widefield SSOCTA (26 × 21 mm; depth 6-12 mm). B-scan image stacks were processed using a grayscale differencing algorithm, a deep learning model, and color deconvolution to get choroidal macrovessels segmentations, which integrated into structural stacks, forming 3D vasculature-tissue models. In 3D Slicer, geometric symmetry of the posterior ocular surface and large choroidal artery topographic distribution were analyzed within the 12-mm Early Treatment Diabetic Retinopathy Study (ETDRS) grid area (coronal reference).

Results: Asymmetry in posterior surface morphology was found in 72% of non-high myopia eyes, predominantly characterized by horizontal expansion in the inferotemporal macular quadrant. In exceeding -8.00 diopters (D) high myopia eyes, asymmetry was present in 90%, primarily featuring nasal horizontal expansion; pathological myopia additionally exhibited axial elongation. Choroidal macroarteries were distributed along the horizontal line through the fovea. Nasal arteries were thinner and shorter compared to temporal

arteries. Significantly reduced choroidal arteries were observed within regions of nasal expansion.

Conclusions: Precise localization analysis demonstrates that geometric asymmetry of the posterior ocular surface, particularly nasal expansion, detrimentally impacts choroidal arteries, likely leading to the loss of the inherently smaller nasal vessels. This exacerbates choroidal ischemia and may contribute to a vicious cycle promoting high myopia progression.

Abstract No.: 200741
Automated Detection and Quantification of Intraretinal Microvascular Abnormality (IRMA) on Widefield Swept-Source Optical Coherence Tomography Angiography (WF-SSOCTA) in Diabetic Retinopathy (DR): Development of Customized Artificial Intelligence Deep Learning Model II in the DRIVE Study

*First Author: Wenjun **SONG***
*Co-Author(s): Colin Ming Hui **GOH**, Yue **QIU**, Wei Hing **SEAH**, Sandy Wenting **ZHOU**, Lingyi **ZHUANG***

Purpose: To evaluate a customized deep learning algorithm (Model II) for automated IRMA segmentation on WF-SSOCTA, and to correlate findings with DR severity.

Methods: Sixty-five eyes were imaged with 12 × 12 mm, 1024 × 1024 pixel SSOCTA. Two independent graders produced pixel-level IRMA annotations; discrepancies were adjudicated by a retinal specialist, yielding 678 references. A multiscale U-Net with squeeze-and-excitation attention was trained using heavy augmentation and five-fold cross-validation. Confidence-guided preprocessing excluded motion blur and projection artifacts. Pixel-level performance was measured by the F1 score and object-level accuracy, using intersection-over-union (IoU) ≥50%.

Results: Model II achieved a pixel-level F1 of 0.51, exceeding published benchmarks (0.29–0.48). Object-level F1 reached 0.71 at IoU ≥50%. Median IRMA counts climbed from 3.3 ± 0.6 in mild and 7.3 ± 3.0 in moderate nonproliferative diabetic retinopathy (NPDR) to 12.1 ± 11.0 in severe NPDR and 10.7 ± 14.1 in PDR ($P < 0.001$ overall), yet showed no significant difference between severe NPDR and PDR ($P = 0.05$), implying replacement of IRMAs by neovascularization or diffuse ischemia.

Conclusions: This convolutional neural network (CNN)–U-Net framework delivers the first widefield benchmark for automated IRMA segmentation on SSOCTA. Offering clinically relevant accuracy and resilience to image-quality variations, it reduces manual workload and supports objective DR grading. Integrated with Model I for nonperfusion analysis, it forms a comprehensive, scalable pipeline for biomarker-based decision support and longitudinal DR monitoring across diverse hardware setups and routine workflows.

Abstract No.: 200716
Automated Identification and Quantification of Nonperfusion Area (NPA) on Ultra-Widefield Swept-Source Optical Coherence Tomography Angiography (UWF-SSOCTA) in Diabetic Retinopathy (DR): Development of Customized Artificial Intelligence Deep Learning Model I in the DRIVE Study

*First Author: Yue **QIU***
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Purpose: To evaluate the efficacy of a customized deep learning algorithm for automated quantification of NPA on UWF-SSOCTA for DR severity assessment.

Methods: This cross-sectional study included 100 eyes from 85 participants across all grades of DR severity. A convolutional neural network (CNN) based on a multiscale U-Net backbone was developed to segment NPAs on en face SSOCTA all-retinal-layer (ARL) images acquired using four scan protocols: 6 × 6 mm, 12 × 12 mm, 26 × 21 mm, and 29 × 24 mm. The manual ground truth annotations of NPAs on en face OCTA and shadow artifacts on en face OCT were provided by two independent graders and

adjudicated by a vitreoretinal specialist. A novel preprocessing pipeline was incorporated to exclude nongradable regions caused by signal attenuation or imaging artifacts. Segmentation outputs yielded total NPA (pixels) and NPA index (NPA/gradable area). Pixel-level accuracy was summarized with the F1 score.

Results: Model I achieved a mean F1 score of 0.85 ± 0.05, invariant across scan sizes (ΔF1 < 0.02). Artifact exclusion improved precision by 6 % versus naïve segmentation. The algorithm reliably differentiated true non-perfusion from shadow artifacts, maintaining performance across all images. NPA index rose significantly with increased DR severity ($p < 0.001$).

Conclusions: This CNN algorithm enables accurate, efficient, and reproducible quantification of NPAs on SSOCTA. It offers significant potential for clinical integration by improving workflow efficiency, supporting objective DR grading, and enhancing the reproducibility of OCTA-based biomarker analysis.

Abstract No.: 200275
Automated Posterior Scleral Topography Assessment for Enhanced Staphyloma Visualization and Quantification With Improved Maculopathy Correlation

*First Author: Xi **CHEN***

Purpose: Subjective assessment of posterior staphylomas based on morphology lacks reproducibility and scalability, and its association with myopic macular degeneration (MMD) remains unclear. This study aims to develop a precise, quantitative method to characterize posterior scleral shape.

Methods: Using deep learning, we automatically segmented surface points of the eyeball from magnetic resonance imaging (MRI) scans to reconstruct posterior scleral topography. In a three-dimensional Cartesian coordinate system, we calculated distances (D) from each point to a pre-elongation eye center and local curvatures (C). Derived parameters included Dmean, Cmean, Dmax, Cmax, Dvar, and a composite curvature-depth index (C·D). These were analyzed for concordance with traditional staphyloma classifications and their correlation with MMD grades. Staphylomas were categorized into three types: type 0 (symmetrical elongation without focal protrusion), type 1 (symmetrical elongation with conical protrusion), and type 2 (asymmetrical nasal/temporal protrusion).

Results: In 6827 eyes (6827 participants), segmentation achieved a Dice coefficient of 0.935. C·Dmax (AUC: 0.923) and Dvar (AUC: 0.981) were the most effective parameters in differentiating between staphyloma types. All key parameters showed strong discriminative power (AUC > 0.900). Dvar ($\beta = 0.75$ mm^{-2}, $P = 0.02$) and C·Dmax ($\beta = 2.44$, $P = 0.02$) were significantly associated with MMD grade, independent of age and axial length.

Conclusions: This MRI-based automated analysis enables objective visualization and quantification of posterior staphyloma morphology, offering a scalable tool for classifying staphyloma subtypes and assessing their relationship to macular degeneration.

Abstract No.: 200647
Automated Quantification of Fluorescein Angiography (FA) Leakage in Uveitis

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Purpose: To develop and validate an objective, reproducible method for quantifying vascular leakage in FA for uveitis patients, addressing the current limitations of subjective interpretation, particularly in cases with retinal vasculitis with peripheral vascular leakage.

Methods: We designed a Python-based FA analysis pipeline using paired early- and late-phase images. Grayscale conversion and CLAHE contrast enhancement were followed by Frangi filter–based vessel segmentation. Images were aligned via Oriented FAST and Rotated BRIEF (ORB)–based feature matching and homography transformation (Random Sample Consensus [RANSAC]). Subtraction of the early from the late phase highlighted

leakage, which was binarized using Otsu thresholding. The leakage area was expressed as a percentage of total retinal area. Clinical validation was performed in patients with tubercular retinal vasculitis.

Results: In a clinical cohort of 26 patients with tubercular retinal vasculitis, baseline and follow-up FA images were analyzed. Patients were grouped based on treatment modality: Group A (n = 13) received only antitubercular therapy (ATT), while Group B (n = 13) received ATT followed by immunosuppressive therapy (IST). Residual leakage was notably higher in patients belonging to Group B, requiring IST, suggesting quantification can predict therapeutic escalation needs. Group B demonstrated a significantly greater reduction post-IST (P = 0.0081).

Conclusions: This semi-automated, physics-informed FA analysis offers an objective and reproducible method for quantifying vascular leakage in uveitis. It enables precise tracking of inflammation and therapeutic response, particularly in retinal vasculitis. It lays the groundwork for future fully automated image analysis systems and has the potential to standardize treatment decisions in uveitis care.

Abstract No.: 200963
Diagnostic Performance and Inter-Test Agreement of Optical Coherence Tomography (OCT) for Posterior Vitreous Detachment (PVD): A Systematic Review

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Purpose: To systematically review the diagnostic accuracy and inter-test agreement of OCT against various reference standards for detecting PVD in blinded, within-subject studies.

Methods: We followed the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines and registered the protocol in PROSPERO (CRD42024580929). PubMed, Scopus, Embase, ScienceDirect, Web of Science, Google Scholar, and Cochrane were searched. Eligible studies were English-language, blinded within-subject studies in which any OCT served as the index test and compared with a non-OCT; or alternative OCT with a different modality, scan protocol, PVD criteria, or grader type; as reference standards on the same eyes within ≤24 hours.

Results: Five studies (812 patients, 922 eyes) qualified; all used spectral-domain OCT (SDOCT). High-density imaging (61 B-scans, macula + optic nerve head [ONH], 120 µm spacing) yielded 96% sensitivity, 88% specificity, $\kappa = 0.84$ versus a composite slit-lamp/indirect standard. A routine 31-scan macular cube (240 µm spacing, ONH excluded) achieved only $\kappa = 0.14$ versus slit-lamp and 21 % sensitivity versus intraoperative video. Inter-grader data showed 89–91% accuracy for an expert versus a rule-based algorithm and ResNet-50 convoluted neural network, and $\kappa = 1.00$ for two novices versus two experts. Three studies were low risk of bias; two had "some concerns" owing to unclear blinding of OCT readers to clinical data.

Conclusions: SDOCT accuracy for PVD is scan-dependent: dense, widefield volumes rival slit-lamp biomicroscopy, whereas sparse macular cubes under-detect residual cortex and perform poorly against surgical inspection.

Abstract No.: 200670
Enhance Diabetic Retinopathy (DR) Grading by Artificial Intelligence (AI)–Assisted Vascular Biomarker Evaluation Using Ultra-Widefield Swept-Source Optical Coherence Tomography Angiography (UWF-SSOCTA)–DRIVE study

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*Co-Author(s): Tai Yong **LOH**, Yue **QIU**, Wei Hing **SEAH**, Wenjun **SONG**, Nuo **TANG**, Sandy Wenting **ZHOU**, Lingyi **ZHUANG***

Purpose: To evaluate DR biomarkers on UWF-SSOCTA using a deep learning model, and to assess their correlation with clinical DR severity.

Methods: This prospective, cross-sectional study included 158 eyes from 120 patients across all DR stages, imaged with 29 × 24 mm UWF-SSOCTA. Key metrics included

nonperfusion area (NPA) index (NPI = total NPA/gradable area), number of neovascularizations (NVs) and intraretinal microvascular abnormalities (IRMAs) in different regions using a self-developed extended Early Treatment Diabetic Retinopathy Study (ETDRS) grid: central zone (≤9 mm), mid-zone (9–18 mm), and outer zone (>18 mm). All biomarkers were quantified using a custom-built deep learning model with manual refinement.

Results: Total NPI significantly increased with DR severity ($P < 0.001$). In proliferative diabetic retinopathy (PDR) eyes, an NPI >10.9% yielded 77% sensitivity for predicting PDR. Higher NPI correlated with the presence of neovascularization of the optic disc (NVD) ($P = 0.028$), increased neovascularization elsewhere (NVE) count ($P = 0.007$), and posteriorly located NVEs ($P = 0.02$). In early DR, NPI rose gradually from mid- (0.9-2.9%) to outer (1.1-4.2%) zones, whereas in severe non-PDR (NPDR) and PDR, NPI surged in the mid (13.2–21%) and plateaued in the periphery (14.2–26.7%). In comparison, the number of IRMAs peaked (80.3%) in the mid-zone from moderate NPDR onwards at the leading edge of ischemia.

Conclusions: UWF-SSOCTA enables rapid, quantitative, and comprehensive assessment of DR biomarkers. AI-enhanced OCTA-driven DR grading allows reproducible risk stratification. Quantitative biomarkers such as NPI and IRMAs are powerful predictors for DR progression and hold promise for objective endpoints in clinical trials.

Abstract No.: 201259
Improving Patient Workflow Speed Using Artificial Intelligence (AI)–Driven Automated Diagnoses of Ultra-Widefield Fundus Images

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Purpose: To develop and validate a machine learning (ML) model for automated diagnosis of ultra-widefield fundus images and evaluate its impact on patient workflow in a tertiary eye care center.

Methods: Two ML pipelines were trained—one using region of interest (ROI) and one without. With ROI, 9060 labelled and 6041 unlabelled images were used; without ROI, 3000 labelled and 4407 unlabelled images were included. Models such as ResNet, DenseNet, and MobileNetV3 were trained after data augmentation. Model performance was evaluated using precision, recall, F1-score, and accuracy. A pilot study of 45 patients assessed turnaround time (TAT) before and after AI-assisted OPTOS imaging.

Results: The non-ROI-based model performed better (Precision: 0.98, Recall: 0.97, F1-score: 0.98, Accuracy: 0.97). OPTOS AI reduced patient TAT by over two hours.

Conclusions: ML models of ultra-widefield fundus provided excellent diagnoses of healthy and abnormal fundus images. This resulted in faster referral of patients to specialist doctors and streamlined the workflow. OPTOS AI enables rapid, accurate fundus screening, reducing patient turnaround time, improving early retinal disease detection, and optimizing referrals.

Abstract No.: 201059
Predicting Epiretinal Membrane (ERM) Formation From Normal Color Fundus Images Using Deep Learning

*First Author: Yi-ting **HSIEH***

Purpose: To develop and evaluate deep learning models for predicting the formation of idiopathic epiretinal membrane (ERM) from normal color fundus photography.

Methods: Normal fundus images from eyes contralateral to idiopathic ERM (ERM/normal group) and from individuals with bilaterally healthy eyes (normal/normal group) were retrospectively collected and used to train deep learning models (ResNet101, ResNeXt101, ConvNeXt) to differentiate two groups. An external validation dataset included fundus images from eyes that later developed ERM (pre-ERM) and another dataset of normal controls. A total of 1143 color fundus images from 406 subjects were used for model

development, and an additional 138 images from 55 subjects were used for external validation. Model performance was assessed by accuracy, sensitivity, specificity, precision, F1-score, and area under the receiver operating characteristic curve (AUC). Gradient-weighted Class Activation Mapping (Grad-CAM) was used to visualize predictive image regions.

Results: Among the models, ConvNeXt demonstrated the most balanced performance, with a sensitivity of 78.26%, F1-score of 73.47%, and AUC of 88.81% on the test dataset. In external validation, ConvNeXt achieved 76.81% sensitivity and 74.65% F1-score. Heatmap analysis revealed that retinal vessel arcades, particularly the region between the first and second divisions of veins, were consistently highlighted for prediction, while the macular region was less emphasized.

Conclusions: The deep models showed strong performance in predicting idiopathic ERM development, even on external datasets, and identified novel structural features potentially associated with ERM pathogenesis. These findings suggest that deep learning-assisted screening of fundus photographs may enable early identification of patients at risk of ERM.

Abstract No.: 200775
Quantifying Macular Choriocapillaris (CC) Perfusion in High Myopia Using Super-Resolution Imaging

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Purpose: To construct super-resolution CC images for quantifying macular blood supply in the outer retina of healthy and high-myopic eyes across different age groups.

Methods: This cross-sectional study included 633 healthy eyes and 140 high-myopic eyes (axial length ≥26.5 mm). En face images of the macular region were obtained using swept-source optical coherence tomography angiography (SSOCTA) with a 3 × 3-mm scanning area. Using 2D-to-3D image transformation, we constructed a 3D topographic map of the CC en face images at the macular center, achieving an improved resolution of one mm/pixel. After validating image accuracy, we quantified CC parameters, including vessel thickness, vessel complexity, vessel distribution uniformity, and blood perfusion. Statistical analysis was performed using multivariate regression, adjusted for axial length and age.

Results: The 3D topographic maps revealed detailed CC vasculature with high accuracy. Statistical analysis revealed that with aging, the vessel thickness of CC in healthy eyes became thicker, and there was a decrease in vascular complexity, distribution uniformity, and perfusion. These changes were exacerbated in high myopia, with abnormal CC parameters exceeding physiologic age-related ranges.

Conclusions: In high myopia, severe CC atrophy leads to imaging artifacts where medium/large choroidal vessels appear displaced into the CC en face plane. Super-resolution imaging enables comprehensive vascular assessment of the CC layer in high myopia, overcoming the limitations of the traditional parameters (e.g., flow deficit percentage) and revealing true CC hemodynamic status.

Ocular Oncology & Pathology

Abstract No.: 200806
Diagnostic Yield, Safety and The Cancer Genome Atlas (TCGA) Risk Stratification of Transretinal Vitrector Biopsy in American Joint Committee on Cancer (AJCC) Stage 1–2 Choroidal Melanoma: A Retrospective Cohort Study

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Purpose: To evaluate diagnostic yield, safety and TCGA molecular classification from transretinal vitrector biopsy in early-stage uveal melanoma and outcomes by clinical indication.

Methods: A single-center retrospective study included patients with AJCC stage cT1–2

choroidal melanoma who underwent vitrector biopsy between 2019 and 2024. Demographics, tumor features, biopsy indication (diagnostic vs. prognostic), and treatment details were recorded. Diagnostic yield was assessed using cytomorphology, BAP1 immunohistochemistry (IHC), and chromosomal microarray (CMA). TCGA risk classification was defined as Group A–D (CMA) or A/B (BAP1 retained) versus C/D (BAP1 aberrant). Post-biopsy complications were observed for six months.

Results: A total of 29 eyes from 29 patients (mean age 58 years) were analyzed. Cytological diagnosis was achieved in 27/29 cases (93%), CMA-based classification in 27/29 (93%), and BAP1 IHC in 22/29 (76%). Cytology or CMA yielded diagnostic results in 28/29 cases (97%). All prognostic biopsies (11/11) yielded interpretable cytology, CMA, and BAP1 IHC. Diagnostic biopsies yielded cytology in 16/18 (89%), CMA in 16/18 (89%), and BAP1 IHC in 11/18 (61%). High metastatic TCGA risk profiles (Group C/D) were identified exclusively in T1/1a tumors. Two patients (6.9%) required vitrectomy for post-biopsy haemorrhage. No cases of tumour dissemination, endophthalmitis, or retinal detachment were observed within six months.

Conclusions: Vitrector biopsy is a safe, high-yield procedure for prognosis and diagnosis in early-stage choroidal melanoma. TCGA high-risk molecular profiles can be identified in low-stage tumors, highlighting the limitations of AJCC staging alone and the utility of vitrector biopsy for personalized risk stratification.

Abstract No.: 200377
Efficacy of Doxycycline Treatment for Ocular Adnexal Lymphoma (OAL) Linked to Chlamydia Psittaci (C. Psittaci): A Systematic Review and Meta-Analysis

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Purpose: Recent studies have reported an association between C. psittaci and OAL, suggesting an antigen-driven pathogenesis. This study aimed to evaluate the therapeutic efficacy of doxycycline as an eradication therapy for C. psittaci in patients with OAL.

Methods: A systematic review was conducted using PubMed, Cochrane, Scopus, EBSCO, and ProQuest databases, supplemented by hand searching, covering studies from 2000 to 2025. Eligible studies included OAL patients treated with doxycycline, with or without C. psittaci detection. Two independent reviewers screened studies according to Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines and assessed their quality using the Joanna Briggs Institute (JBI) Critical Appraisal Tool. The primary outcome was the overall response rate (complete or ≥50% partial response). We also analyzed C. psittaci positivity rate and its association with treatment response.

Results: Nine studies were included for qualitative appraisal, with the majority of cases identified as extranodal marginal zone lymphoma or mucosa-associated lymphoid tissue. Among these, five studies administered doxycycline as first-line therapy for all patients, and two studies did not assess C. psittaci status. The dosage of doxycycline was either 2 x 100 mg or 1 x 200 mg daily, with treatment durations varying across studies. Eight of the nine studies were eligible for meta-analysis, which demonstrated an overall response rate of 41% (95% confidence interval [CI]: 23-60%; $P < 0.01$).

Conclusions: Doxycycline may serve as a treatment option for OAL, particularly in C. psittaci-positive cases or in regions with a high prevalence of the infection. However, conflicting evidence warrant further large-scale studies.

Abstract No.: 200127
Microneedle Scleral Patch (MSP): A Transscleral Drug Delivery Study for Retinoblastoma

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Purpose: This study aimed to design, fabricate, and evaluate the pharmacokinetic properties of topotecan loaded with MSP in the rabbit eye.

Methods: The MSP was fabricated using 3D-printed master mold and a high-molecular-weight sodium hyaluronate biopolymer containing 90 conical microneedles (MN) arranged in a 15 x 6 array format (10 x 5 x 0.2 mm). MSP was loaded with 100 µg of topotecan to study its pharmacokinetics across the choroid-retina complex.

Results: The dimensions of MN were uniform across the array, measuring 555 +/- 4 µm length, 342 +/- 3 µm width, and 23 µm tip diameter. In the ex vivo goat eye model, the required insertion force was 0.026 newtons (N) per needle, which was 50 times lower than the compression strength of 1.27 N per needle. The MNs were inserted up to a depth of 225 µm. MNs were completely dissolved in phosphate buffer (pH 7.4) within 25 s. The average amount of topotecan HCl in 15 MSP was 99.39 ± 12.45 µg. In the in vivo rabbit model (9 eyes, choroid-retina complex), topotecan levels peaked at 1 hour (2.75 ± 2 µg/ml) and decreased at 2 hours (0.64 ± 0.3 µg/ml), attaining 200 times the therapeutic target level. At 8 hours, the drug level was undetectable (0.02 ± 0.01 µg/ml). The patch completely dissolved within 2 to 4 minutes without fundus changes.

Conclusions: MSP fabricated using sodium hyaluronate has the physical attributes required for transscleral drug delivery in clinical applications. Topotecan-loaded MSP achieved therapeutic target levels for retinoblastoma. MSP offers a promising alternative drug delivery route for treating retinoblastoma.

Abstract No.: 200931
Nonresolving Bilateral Vitreous Hemorrhage: A Rare Initial Presentation in Trilateral Retinoblastoma

*First Author: Alex **SEE SUA***
*Co-Author(s): Carlo Antonino **NASOL***

Purpose: To present a rare case of retinoblastoma where vitreous hemorrhage was an early and significant sign.

Methods: A healthy 17-month-old male, born full-term, sought consultation because of mild periorbital erythema on his left eye. There was no history of ocular trauma, significant medical or family history of bleeding tendencies or eye tumors. Anterior and posterior segment examination was unremarkable. He was treated with antibiotics, but similar symptoms occurred in the contralateral eye. His condition worsened with a decrease in vision to hand motion and the appearance of vitreous hemorrhage in his left eye. No evidence of a solid intraocular tumor was demonstrated on B-scan ultrasonography. Despite vitrectomy, recurrent hemorrhages and subsequent retinal detachments occur.

Results: Cytopathological analysis of the vitreous samples showed hemorrhages, inflammatory cells, and fibrocellular membranes. The final diagnosis was confirmed only through histopathological analysis of the enucleated eye, revealing diffuse infiltrating retinoblastoma with high-risk features including choroidal, optic nerve, and subarachnoid invasion. Magnetic resonance imaging revealed a pineal gland tumor and a contralateral intraocular tumor requiring enucleation. The patient underwent intensive chemotherapy with radiotherapy and remained disease-free two years post-treatment.

Conclusions: This case demonstrates the importance of early detection and intervention in retinoblastoma presenting with unusual symptoms such as vitreous hemorrhage. It also underscores the need for vigilance and thorough diagnostic workup when confronted with unusual signs, as timely intervention can significantly impact outcomes.

Abstract No.: 201087
Progression of Retinal Atrophy Following Intravitreal and Intra-Arterial Melphalan Treatment for Retinoblastoma: An 11-Year Follow-Up Case Report

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*Co-Author(s): Michael **BLAIR**, Paul **CHAN**, Maria **FERNANDEZ**, Theinchai **PASURAKUL**, Michael **SHAPIRO**, Carol **SHEILDS***

Purpose: To report a case of chorioretinal atrophy following intra-arterial and intravitreal melphalan therapy for retinoblastoma after follow-up for 11 years.

Methods: A case report.

Results: An eight-year-old male with a diagnosis of retinoblastoma presented with blurry vision in his right eye. Initial examination revealed a retinal mass with vitreous seeding. He was treated with intra-arterial and intravitreal melphalan. Visual acuity improved from 20/150 to 20/30 after the first year of treatment, with tumor regression noted. Despite cessation of therapy, the patient developed progressive chorioretinal atrophy over 11 years, threatening the fovea. Multimodal imaging, including optical coherence tomography (OCT) macular and infrared OCT, revealed significant retinal thinning and chorioretinal changes over time.

Conclusions: The progression of retinal atrophy despite treatment cessation highlights the long-term risks associated with melphalan therapy. While effective for tumor control, melphalan may lead to delayed retinal damage, underscoring the need for continued monitoring. The role of multimodal imaging, particularly infrared OCT, in assessing and tracking these changes is emphasized.

Abstract No.: 201238
Radiation Retinopathy (RR): Imaging Features and Treatment Outcomes

*First Author: Kavya **TEEGALA***

Purpose: To study the imaging characteristics of RR using optical coherence tomography (OCT) and fluorescein angiography, and to assess the treatment outcomes.

Methods: This was a retrospective, observational study including 29 patients (58 eyes) diagnosed with RR between 2013 and 2023.

Results: The mean age at presentation was 51 years (range, 27-68 years) including 16 males (55%) and 13 females (45%). Of 58 Eyes, 24 eyes underwent external beam radiotherapy and three eyes underwent plaque brachytherapy. The mean interval from radiation therapy to RR diagnosis was 27 months (range, 9-90 months). Radiation maculopathy (RM) was observed in 32 eyes (55.1%), and radiation optic neuropathy in 10 eyes (17.2%). OCT revealed cystoid macular edema in 34 eyes (58.6%), intraretinal fluid in 14 eyes (24.1%), subretinal fluid in five eyes (8.6%), and hyperreflective dots in five eyes (8.6%). Fundus fluorescein angiography (n = 13) showed neovascularization in five eyes (8.6%), capillary nonperfusion in four eyes (6.8%), and macular ischemia in two eyes (8.6%). Treatment for RR and RM included anti–vascular endothelial growth factor (anti-VEGF) (21 eyes), intravitreal triamcinolone (5 eyes), dexamethasone implant (6 eyes), and laser photocoagulation (13 eyes). Treatment outcomes included resolution of cystoid macular edema in 23 eyes (67.6%) and disease stabilization in 28 eyes (77.7%). The mean final best-corrected visual acuity improved from 1.0 to 0.80 logMAR (P =0.4).

Conclusions: Multimodal imaging enables early detection of RR prior to overt clinical signs. Early intervention with intravitreal anti-VEGF injections forms the mainstay of treatment for RM and thereby preserves vision.

Abstract No.: 200400
Uveal Melanoma (UM): Treatment Approaches and Prognostic Outcomes Based on the American Joint Committee on Cancer (AJCC) Staging in a Tertiary Referral Center

*First Author: Duangnate **ROJANAPORN***
*Co-Author(s): Thanaporn **KRITFUANGFOO***

Purpose: To evaluate the clinical characteristics, treatment outcomes, and prognosis of UM

using the 8th edition of the AJCC staging system.

Methods: A retrospective analysis was conducted on patients diagnosed with UM between 2010 and 2024. Data on demographics, clinical presentation, tumor characteristics, treatment modalities, and follow-up outcomes were systematically reviewed and analyzed.

Results: A total of 106 patients were included, with a mean age at diagnosis of 51.6 years (range 16–86). The most common tumor location was the choroid (94.3%), followed by the ciliary body (3.8%) and iris (1.9%). Tumor staging by the AJCC classification was T1 (18.9%), T2 (17.9%), T3 (48.1%), and T4 (15.1%). Primary treatments included enucleation (53.8%), Ruthenium-106 (106Ru) brachytherapy (29.2%), endoresection with 106Ru (16.0%), and exoresection (0.9%). At a median follow-up of 37.3 months, the overall globe salvage rate was 44.3%. Kaplan-Meier analysis demonstrated a 5- and 10-year distant metastasis rate of 22%, with overall survival rates of 78% and 71%, respectively. The melanoma-related mortality rate was 3.4 per 100 person-years, increasing by T-stage: 1.4 (T1), 3.5 (T2), 4.1 (T3), and 9.6 (T4). Multivariate analysis identified distant metastasis as the only significant predictor of overall survival (hazard ratio [HR] 50.6, P < 0.001).

Conclusions: This study provides insights into the clinical features, treatment outcomes, and prognostic factors of UM in a Southeast Asian cohort. Tumor stage, as classified by the 8th AJCC system, and the presence of distant metastasis significantly influence prognosis, highlighting the importance of early detection and individualized treatment strategies to improve patient outcomes.

Pediatric Retina

Abstract No.: 200591
Comparison of Efficacy and Recurrence Rates of Intravitreal Ranibizumab and Ranibizumab Biosimilar in Retinopathy of Prematurity (ROP)

*First Author: Shobhit **CHAWLA***
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Purpose: To compare the efficacy and recurrence rates of intravitreal ranibizumab biosimilars versus ranibizumab.

Methods: A retrospective study over two years of babies treated with intravitreal injections of ranibizumab and ranibizumab biosimilar, who were divided into Group A and Group B, respectively. We compared the demographic characteristics, morphological details of ROP, efficacy of injection, incidence and interval of recurrence, and need for repeat treatments. Anatomical outcomes were assessed at the last follow-up.

Results: A total of 52 eyes in Group A and 46 in Group B were included. Baseline characteristics were comparable. The most common indication was aggressive ROP in both groups. All eyes responded to the initial anti–vascular endothelial growth factor injections with regressed "plus" in all eyes in both groups. 53.85% in Group A and 65.22% in Group B had recurrence (P = 0.25). The postmenstrual age (PMA) at recurrence was significantly lower in Group B (38.73 + 4.57 weeks) versus Group A (43.14 + 1.76 weeks)(P < 0.0001). Group B also had a significantly earlier recurrence at 6.13 + 2.13 weeks as compared to Group A (8.36 + 1.25 weeks) (P < 0.0001). The majority of the eyes were treated with laser after recurrence. 92% eyes in Group A and 84.09% in Group B had good (attached retina without anatomical sequelae) anatomical outcomes.

Conclusions: In our study, although the recurrence rates were similar in both groups, it was earlier and at a lower PMA in the case of biosimilars. Whilst ranibizumab biosimilar might be an affordable option, earlier recurrence and

need for reintervention should be explained, and strict follow-up should be maintained. The need for additional treatments should be explained.

Abstract No.: 201385
Cone Dysfunction Syndrome (CDS): Clinical and Genetic Profiling at a Tertiary Center in South Indian Population

*First Author: Goura **CHATTANNAVAR***
*Co-Author(s): Rachana **MARAGANI**, Vyshnavika **MUPPARAPU**, Mudra **PURANIK***

Purpose: CDS is characterized by congenital onset of variable vision loss, color vision deficiency, nystagmus and photophobia. The five known types are achromatopsia, blue cone monochromacy, oligocone trichromacy, bradyopsia and Bornholm disease. It is important to differentiate CDS from cone dystrophy as the latter is a progressive condition.

Methods: All patients with molecular diagnosis of CDS between June 2024 and June 2025 from a single ocular genetic service at a tertiary eye care centre were included. Clinical profile included Referral diagnosis, details of presenting symptoms such as photophobia, nystagmus and color vision deficiencies. Electrophysiology, Fundus autofluorescence and optical coherence tomography were advised. All underwent whole exome sequencing, with genetic counseling.

Results: A total of 15 patients aged 7.4 ± 4.6 years, seven male (46.6%) and eight female (53.3%), were genotypically diagnosed as CDS. The common referral diagnoses were retinal dystrophy (7, 46.6%), infantile nystagmus (5, 33.3%), and achromatopsia (3, 20%). The most common symptoms were photophobia (86%) and nystagmus (78.5%). Electroretinogram of 14 patients (93.3%) showed reduced or extinguished photopic response. Achromatopsia was the most common CDS (Biallelic CNGA3 in 10, CNGB3 in 2) followed by bradyopsia (RGS9 1 and RGS9BP 1) and blue cone monchromacy in 1 (OPN1MW).

Conclusions: CDS is most commonly misdiagnosed as cone dystrophy and molecular diagnosis aids in clarifying the diagnosis.

Abstract No.: 200720
Long-term Anatomical and Functional Outcomes Following Encircling/Segmental Buckle Surgery in Retinopathy of Prematurity (ROP): A Comprehensive Study With Extended Follow-up

*First Author: Pradeep **SUSVAR***
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Purpose: To assess the anatomical and functional outcome and long-term sequelae of buckle surgery in premature infants with ROP.

Methods: This single-center, retrospective, and interventional study analyzed records who underwent encircling (Group A) or segmental (Group B) buckle surgery over the past 30 years.

Results: A total of 105 eyes (85 eyes in Group A, 20 in Group B) were analyzed. The average gestational age was 30.05 ± 2.73 weeks, with a mean birth weight (BW) of 1383 ± 411.01 grams. Seventy-five eyes had stage 4A ROP (66 in Group A, 9 in Group B). Preoperative treatment with anti–vascular endothelial growth factor and/or laser therapy was administered in 52 eyes. Plus disease in 22 eyes. Primary surgery success rate was 90.5% (77/85) (4A: 93.9%; 4B: 78.9%) in Group A and 90% (19/20) (4A: 88.8%; 4B: 90.9%) in Group B. Preoperative treatment (P = 0.007) and combined intervention (P = 0.028) were significantly correlated with anatomical success. The encircling band was removed 12 weeks post-surgery, with an average residual myopia of -6D. The mean follow-up duration was 60.09 ± 45.15 months for Group A and 31.94 ± 48.60 months for Group B. The mean spherical equivalent at the most recent follow-up was -6D (Group A) and -3.12D (Group B). Central, steady, and maintained vision was achieved in 32% (28/85) of Group A and 55% (11/20) of Group B.

Conclusions: Scleral buckling is an effective and less invasive treatment for stage 4 ROP, particularly in cases with peripheral traction anterior to the equator, helping prevent disease progression.

Abstract No.: 200159
Observations of Simultaneous Aggressive Anemia Correction and Intravitreal Therapy for Aggressive Retinopathy of Prematurity (A-ROP): A multimodal ROP assessment study (MROPAS) Report Number 2

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Co-Author(s): Akash ***BELENJE****, Subhadra* ***JALALI****, Tapas* ***RANJAN PADHI***

Purpose: To study the effect of simultaneous aggressive anemia correction and intravitreal injection of anti–vascular endothelial growth factor (anti-VEGF), bevacizumab, in A-ROP using multimodal imaging biomarkers.

Methods: Non-contact ultra-widefield (NC-UWF) fundus imaging with integrated UWF-guided swept-source optical coherence tomography (SSOCT) was performed prospectively in preterm babies before and after intravitreal anti-VEGF (bevacizumab) monotherapy. All babies with anemia, defined as a hemoglobin of less than 10.00 g/dL, were advised to undergo blood transfusion with the neonatologist. The imaging outcomes of babies who were transfused (Group 1, 40 eyes of 20 babies) were compared to babies who did not undergo transfusion (Group 2, 40 eyes of 20 babies).

Results: Group 1 eyes showed faster reduction of multilayered hemorrhages (P = 0.030) and faster vascular progression to zone 3 (P = 0.004). Group 2 A-ROP eyes had a higher incidence of reactivation (P = 0.038), higher incidence of peripheral avascular retina (PAR) (P = 0.044), and need for retreatment with laser (P = 0.001, compared to Group 1. Reduction in ischemic OCT biomarkers, such as resolution of hyperreflectivity of inner retinal layers and improvement in choroidal thickness >250 microns, was better in Group 1 when compared to Group 2.

Conclusions: Prompt correction of moderate to severe anemia with blood transfusion in anti-VEGF–injected A-ROP eyes resulted in faster reduction of retinal hemorrhages and faster retinal vascular progression to the periphery. These eyes showed improved multimodal imaging biomarkers and a lower chance of reactivation or presence of PAR needing retreatment with laser.

Retina (Medical)

Abstract No.: 200780
Abnormal Choroidal Arteriovenous (A-V) Association Impairs Anti–Vascular Endothelial Growth Factor (Anti-VEGF) Efficacy in Neovascular Age-Related Macular Degeneration (nAMD)

First Author: Zheng ***YUPING***
Co-Author(s): Yao ***LIANG****, Wang* ***NIANJIA***

Purpose: To evaluate how aberrant choroidal A-V associations influence the response to anti-VEGF treatment in non-pachychoroid disease (PCD) with macular neovascularization (MNV).

Methods: This retrospective multicenter study enrolled 239 non-pachychoroid nAMD eyes. All patients went through a 3 + PRN (3 monthly injections followed by pro re nata) anti-VEGF protocol. Arterial-phase indocyanine green angiography (ICGA) frames (15 ± 3 s) and venous-phase frames (40 ± 5 s) were coregistered and then overlaid along with swept-source optical coherence tomography angiography (SSOCTA) en face images of major choroidal vessels. These vessels were segmented using a grayscale difference algorithm and generated with a deep learning model, allowing for the precise mapping of large choroidal arteries, veins, and diverse A-V association patterns.

Results: A total of 159 eyes with more than 24-month follow-up were enrolled, categorized into high-frequency treatment group (≥9 injections, n = 61) and low-frequency treatment group (<9 injections, n = 98). The high-frequency treatment group showed prolonged

venous drainage (P < 0.05) and 46% abnormal arteriovenous associations at MNV sites, which were significantly higher (P < 0.001) than 5% abnormal associations in the low-frequency treatment group. In the high-frequency treatment group, abnormal A-V associations predominantly manifested as arterial compression causing venous notching, while in the low-frequency group primarily exhibited crossing among all abnormal associations.

Conclusions: Among non-PCD MNV, abnormal choroidal A-V associations contribute to chronic venous obstruction and vascular wall stress, driving pressure-induced choroidal neovascularization to alleviate venous congestion as a pressure-relief valve. This mechanism underlies suboptimal anti-VEGF efficacy in non-pachychoroid MNV.

Abstract No.: 200588
Aflibercept 8 mg for Retinal Vein Occlusion (RVO): Outcomes of the QUASAR Phase 3 Randomized Trial by RVO Type, Central Retinal Vein Occlusion (CRVO)/Hemi-Central Retinal Vein Occlusion (HRVO) or Branch Retinal Vein Occlusion (BRVO)

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Purpose: Describe outcomes in patients with CRVO/HRVO or BRVO receiving aflibercept 8 mg every eight weeks, after 3 (8q8/3) or 5 (8q8/5) initial monthly injections versus 2 mg every four weeks (2q4) through week 36.

Methods: In QUASAR, patients were randomized to receive 8q8/3 (n = 293), 8q8/5 (n = 298), or 2q4 (n = 301). Visual and anatomic outcomes were evaluated through week 36 by RVO type: CRVO/HRVO or BRVO. Patients in all three treatment groups who met prespecified criteria could have their dosing interval shortened or extended.

Results: Best-corrected visual acuity gains at week 36 was comparable with 8q8/3 and8q8/5 versus 2q4 in patients with CRVO/HRVO (least squares [LS] mean change [letters]: +16.6 and +17.2 vs. +15.9) and BRVO (+18.3 and +19.2 vs. +19.0), with fewer mean (standard deviation [SD]) injections (CRVO/HRVO: 6.1 [0.5] and 6.9 [0.6] vs. 8.7 [0.9] and BRVO: 6.1 [0.6] and 6.9 [0.5] vs. 8.8 [0.6]). Central subfield retinal thickness reductions were similar in all three arms in both RVO types. Most patients in the 8q8/3 and 8q8/5 groups maintained Q8 dosing (CRVO/HRVO: 88.4% and 91.1% and BRVO: 88.6% and 95.3%, respectively). Safety profiles for aflibercept 8 mg and 2 mg were consistent.

Conclusions: Aflibercept 8 mg achieved robust vision and anatomic improvements comparable to 2 mg in CRVO/HRVO or BRVO patients with fewer injections and most patients maintained Q8 dosing.

Abstract No.: 200451
Association of Early Macular Leakage Resolution With Extended Dosing Intervals in Patients With Retinal Vein Occlusion (RVO): A Post-Hoc Analysis of the BALATON/COMINO Trials

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Purpose: In phase-3 BALATON/COMINO (NCT04740905/NCT04740931) trials, a greater proportion of patients with RVO-related macular edema achieved macular leakage (ML) absence with faricimab versus aflibercept at week 24 (W24). We examined the association between the ML area at W24 and extended dosing intervals and best-corrected visual acuity (BCVA) gain at W68.

Methods: Between day 1 and W20, patients were randomized to faricimab (6.0 mg) or aflibercept (2.0 mg) every 4 weeks (Q4W). At W24–W72, all patients received faricimab Q4W–Q16W per a modified treat-and-extend (T&E) regimen. This analysis assessed the percentage of patients on extended dosing (≥Q12W) and BCVA change from baseline at W68 based on the ML area at W24 (N = 989):

≤1 mm² (resolution, n = 502) versus ≥10 mm² (high-ML, n = 143).

Results: At W68, 59.0% and 37.8% patients with W24 ML areas ≤1 mm² and ≥10 mm², respectively, achieved ≥Q12W dosing (nominal P = 0.0001). In multivariable modelling, patients with W24 ML area ≤1 mm² had >2-fold greater odds of achieving ≥Q12W at W68, compared with W24 ML area ≥10 mm² (odds ratio [95% confidence interval]: 2.5 [1.6–3.9]; nominal P < 0.0001). Least squares mean BCVA changes from baseline (standard error) at W68 were higher for W24 ML area ≤1 mm² than for area ≥10 mm² (18.8 [0.6] vs. 15.0 [1.1] letters; nominal P = 0.0036).

Conclusions: Early ML resolution may be associated with extended dosing intervals and greater vision gains at W68. As more patients achieved ML absence with faricimab versus aflibercept at W24, faricimab treatment may achieve extended dosing in RVO by promoting vascular stability beyond vascular endothelial growth factor inhibition.

Abstract No.: 200942
Avacincaptad Pegol (ACP) Reduces Progression of Ellipsoid Zone (EZ) Loss and Degradation in Eyes With the Highest Baseline Ellipsoid Zone Burden

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Purpose: EZ integrity, or photoreceptor health, is a potential biomarker for geographic atrophy (GA) progression rate. The impact of ACP, a therapy for GA approved by the US Food and Drug Administration, was assessed on the progression of EZ integrity over 12 months in eyes with the highest baseline EZ burden.

Methods: GATHER1/GATHER2 evaluated the efficacy and safety of ACP 2 mg versus sham in GA. In this pooled post-hoc analysis, spectral-domain optical coherence tomography was used to assess EZ integrity in the study eye. EZ features were measured as a percentage of the macular area with EZ-to-retinal pigment epithelium (RPE) thickness ≤20 µm (partial EZ attenuation) and 0 µm (total EZ attenuation). The mean growth rates at months 6 and 12 were assessed for each parameter to determine the progression of EZ loss/degradation.

Results: In eyes with the highest baseline total EZ attenuation, the mean total EZ attenuation growth rate with ACP and sham, respectively, was 4.1% vs. 5.4% at month 6 and 7.7% vs. 9.4% at month 12. In eyes with the highest baseline partial EZ attenuation, the mean partial EZ attenuation growth rate with ACP and sham, respectively, was 0.5% vs. 3.6% at month 6 and 2.1% vs. 6.3% at month 12. Similar total EZ attenuation growth rates were observed between ACP and sham at month 6 and month 12.

Conclusions: In eyes with the highest baseline EZ burden, ACP reduced EZ loss/degradation versus sham over 12 months. ACP showed a more pronounced reduction in partial EZ attenuation versus sham, suggesting a more optimal intervention window, particularly in eyes with partially preserved photoreceptor structure.

Abstract No.: 200602
Avacincaptad Pegol (ACP) for Geographic Atrophy (GA): Three-Year Results From the GATHER2 Open-Label Extension Trial

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Purpose: ACP 2 mg is approved by the US Food and Drug Administration for the treatment of GA secondary to age-related macular degeneration. The efficacy and safety of ACP have been demonstrated in two pivotal clinical trials, GATHER1 and GATHER2, in patients with non-center-point-involving GA. This 18-month open-label extension (OLE) study (NCT05536297) assessed the long-term safety of ACP treatment in patients with

GA who previously completed the 24-month GATHER2 trial.

Methods: A total of 278 patients who completed GATHER2 through the month 24 visit on either ACP or sham were administered ACP 2 mg monthly from months 1-17 of the OLE with a final follow-up visit at month 18. Patients were treated with ACP 2 mg up to 42 months (3.5 years) or 18 months if previously on sham in GATHER2. The primary endpoint was safety, which included reporting of adverse events whether or not deemed related to the injection procedure or treatment.

Results: In GATHER2, both monthly and every-other-month ACP 2 mg demonstrated a reduction in GA lesion growth versus sham at two years. There were no reports of retinal vasculitis, ischemic optic neuropathy, or serious intraocular inflammation. In year 2, the incidence of choroidal neovascularization in the study eye was 7.3% for monthly ACP 2 mg, 4.3% for every-other-month ACP 2 mg, and 5.4% for sham. The safety of ACP 2 mg from the 18-month OLE of GATHER2 will be presented.

Conclusions: Long-term results from the GATHER2 OLE will provide valuable information on the continued tolerability of ACP 2 mg for GA over a 3.5-year treatment period.

Abstract No.: 200514
Baseline Ellipsoid Zone Integrity Features as Predictors of Geographic Atrophy (GA) Growth Rate in the Phase 3 GATHER Clinical Trials

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Purpose: GA growth rates vary across eyes. Spectral-domain optical coherence tomography (SDOCT) can examine the integrity of specific retinal features, including the ellipsoid zone (EZ), a biomarker of photoreceptor health. This pooled GATHER1/GATHER2 post-hoc analysis evaluated the association of baseline EZ integrity features with GA growth rate.

Methods: GATHER1/GATHER2 examined the efficacy and safety of avacincaptad pegol versus sham in GA. GA growth rate (slope) over the first 12 months, measured by fundus autofluorescence, was estimated for each patient in the pooled sham groups (N = 332). GA growth rate quartiles were labeled as "very slow," "slow," "moderate," and "fast." SDOCT scans were segmented using machine learning. Baseline EZ integrity features were measured as a percentage of macular area with EZ-to-retinal pigment epithelium (RPE) thickness of ≤20 µm (partial EZ attenuation) and 0 µm (total EZ attenuation). Partial EZ-GA gap was the percentage of macula with EZ-RPE thickness ≤20 µm minus the percentage occupied by GA.

Results: Faster GA growth rates were associated with greater baseline total and partial EZ attenuation. For groups with very slow (n = 70), slow (n = 69), moderate (n = 69), and fast (n = 69) GA growth, the baseline mean (standard deviation [SD]) total EZ attenuation was 22.7% (11.2), 28.3% (12.5), 31.6% (13.7), and 38.6% (12.8), respectively; baseline mean partial EZ attenuation was 36.0% (20.3), 43.8% (17.6), 48.2% (17.3), and 60.1% (19.1), respectively. Faster growth rates were also associated with greater mean baseline partial EZ-GA gap.

Conclusions: Baseline EZ integrity features observed through SDOCT may help predict faster GA progression. Insights on baseline predictors impacting GA growth rates may inform management decisions.

Abstract No.: 200471
Baseline and Early Treatment Response Variables of Faricimab Durability in Treatment-Naïve Neovascular Age-Related Macular Degeneration (nAMD)

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Purpose: In TENAYA/LUCERNE (NCT03823287/NCT03823300), 80% treatment-naïve nAMD patients achieved ≥every 12 weeks (Q12W) and >60% achieved Q16W faricimab dosing at week 112. This post-hoc analysis evaluated the association between baseline and early treatment response, as well as always-extended (≥Q12W) and potential Q20W faricimab dosing.

Methods: Patients received faricimab 6.0 mg up to Q16W after four Q4W doses. Following assessments at weeks 20/24, patients received fixed dosing up to Q16W until week 60 and then a treat-and-extend (T&E) dosing. Univariate and multivariable analyses evaluated association between baseline and early treatment response variables and ≥Q12W dosing from weeks 20/24 to week 112 and patient eligibility for potential Q20W extension during the T&E phase.

Results: The odds ratio (95% confidence interval) of faricimab-treated patients on ≥Q12W dosing during maintenance period (n = 310) increased with lower baseline central subfield thickness (CST) (100 µm decrease; 1.9 [1.2, 2.8]), lower maximum pigment epithelial detachment (PED) thickness at baseline (100 µm decrease; 1.4 [1.2, 1.6]), and smaller baseline choroidal neovascularisation lesion size (5 mm^2 decrease; 1.3 [1.0, 1.6]). Odds also increased for greater change in CST from baseline (additional 100 µm improvement; 1.7 [1.1, 2.7]) and absence of subretinal fluid (SRF) at week 12 (2.5 [1.4, 4.3]). Odds for potential Q20W extension during the T&E phase (n = 591) increased with baseline presence of intraretinal fluid (1.5 [1.1, 2.1]), lower maximum PED thickness at baseline (100 µm decrease; 1.3 [1.2, 1.5]), and SRF absence at week 12 (2.4 [1.4, 4.1]).

Conclusions: These findings suggest that early treatment response variables are associated with the extended durability of the dual angiopoietin-2/vascular endothelial growth factor A inhibitor, faricimab, in treatment-naïve nAMD patients. This supports the idea that early fluid resolution with faricimab contributes to extended durability, including the possibility of a Q20W dosing extension.

Abstract No.: 200183
Best-Corrected Visual Acuity (BCVA) and Central Subfield Thickness (CST) Improvement Over 12 Weeks With OCS-01 Eye Drops in Diabetic Macular Edema (DME) From DIAMOND Stage 1 Trial

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Purpose: DME is commonly treated with invasive intravitreal therapies, while effective topical treatments for DME are currently unavailable. This study assessed the use of topical OCS-01 eye drops (dexamethasone 1.5% ophthalmic suspension) in patients with DME.

Methods: DIAMOND is a prospective Phase 2/3, two-stage, double-masked, randomized, multicenter trial. Endpoints 1 and 2 included the mean change in BCVA as measured by the Early Treatment Diabetic Retinopathy Study (ETDRS) letter score at week 6 compared to baseline, the mean change in CST at weeks 6 and 12, and the proportion of patients with a ≥3-line BCVA gain at weeks 6 and 12.

Results: BCVA improvement was observed with OCS-01 versus vehicle at week 6 (7.2 vs. 3.1 letters, P = 0.007), and week 12 (7.6 vs. 3.7 letters, P = 0.016). A higher proportion of patients in the OCS-01 group achieved a ≥3-line BCVA gain at week 6 (25.3 vs. 9.8%, P = 0.025) and week 12 (27.4 vs. 7.5% P = 0.009). A significant reduction in mean CST was observed in OCS-01 versus vehicle at week 6 (-63.5 vs. 5.4 µm, P < 0.001) and persisted

at week 12 (-61.6 vs. -16.0 µm, P = 0.004). Additionally, treatment-naïve patients showed a benefit in the OCS-01 group versus vehicle (7.5 vs. 2.8 letters), as did previously treated patients (6.4 vs. 3.6 letters). Phakic patients also demonstrated a benefit in the OCS-01 group (6.9 vs. 3.0 letters), as did pseudophakic patients (7.8 vs. 3.6 letters). OCS-01 was well tolerated, with no unexpected adverse events.

Conclusions: The results from these analyses show that OCS-01 met its endpoints 1 and 2 with significance, as well as provided benefits for treatment-naïve patients and those who have been previously treated.

Abstract No.: 200599
CRIMSON, a Phase IIb Randomized Controlled Trial of BI764524 in Nonproliferative Diabetic Retinopathy (NPDR): Rationale and Study Design

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Purpose: One important component of diabetic retinopathy (DR) is progressive retinal nonperfusion (RNP). There are currently no treatment options to address RNP in DR. BI764524, an anti-Sema3A antibody, may induce improvements in RNP and was well tolerated in the HORNBILL trial of diabetic macular ischemia (NCT04424290).

Methods: CRIMSON (NCT06321302) is a phase IIb, multicenter, multinational, randomized, doublemasked trial evaluating the efficacy, pharmacokinetics, safety, and tolerability of intravitreal BI764524 in moderately severe to severe NPDR. To identify the optimal dosing regimen, BI764524 will be administered at different dosing frequencies over a 48-week treatment period followed by a 24-week observation period. The control group will receive sham injections. Approximately 175 patients (≥18 years) with a diabetic retinopathy severity scale (DRSS) of 47–53, presence of RNP, and best-corrected visual acuity ≥49 letters (Early Treatment Diabetic Retinopathy Study chart) will be included. Presence of RNP will be assessed by ultrawidefield fluorescein angiography (UWF-FA). Primary endpoint is occurrence of a ≥2-step improvement from baseline in DRSS at week 52. Key secondary endpoint is occurrence of vision-threatening complications. Imaging modalities will include UWF-FA and optical coherence tomography angiography, to provide in-depth assessments of RNP, assess biomarkers of vascular changes, and explore potential treatment effects. Safety endpoints will assess drug-related adverse events (AEs), ocular AEs, and ocular AEs of special interest.

Results: Not applicable.

Conclusions: BI764524 may improve DR by addressing the underlying RNP. CRIMSON will provide further data on BI764524 in patients with moderately severe to severe NPDR.

Abstract No.: 200877
Causal Pathways Between Metformin, Gut Microbiota, and Neovascular Age-Related Macular Degeneration (nAMD): An eQTL-Based Mendelian Randomization (MR) Study

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Purpose: To explore the causal relationships between metformin, gut microbiota, and nAMD.

Methods: A two-sample MR approach was applied to investigate the potential causal effects between metformin and nAMD. Genetic variants associated with the pharmacologically active genes ETFDH and PRKAB1 were used as instrumental variables. Additionally, a two-step MR analysis was conducted to assess the mediation effect of gut microbiota on the association between metformin and nAMD.

Data for this study were obtained from publicly available GWAS datasets.

Results: There is a significant protective effect of metformin on the risk of nAMD (odds ratio [OR] = 0.9291, 95% confidence interval [CI]: 0.8680-0.9945, P = 0.0340), with the gut microbiota genus Anaerotruncus (OR = 1.0493, 95% CI: 1.0226-1.0767, P < 0.001), playing a mediating role in this relationship. Mediation analysis revealed that approximately 25% of the protective effect of metformin on nAMD is mediated by changes in gut microbiota composition.

Conclusions: By identifying gut microbiota as a key mediator in the metformin-nAMD relationship, our study is among the first to establish a causal link between metformin, gut microbiota, and nAMD through a rigorous MR framework. Future research is necessary to further explore the role of gut microbiota as a mediator in the metformin-nAMD relationship and its implications for therapeutic interventions.

Abstract No.: 200193
Comparative Analysis of Swept-Source and Spectral-Domain Optical Coherence Tomography Angiography (SSOCTA and SDOCTA) in Neovascular Age-Related Macular Degeneration (AMD) From a Tertiary Ophthalmic Center

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Purpose: This cross-sectional study compares the diagnostic performance of SSOCTA and SDOCTA in detecting macular neovascularization (MNV) among AMD patients at a tertiary eye care center.

Methods: Forty eyes with AMD underwent same-day imaging using both SSOCTA and SDOCTA. Neovascularization was assessed across six retinal/choriocapillary layers: superficial capillary plexus (SCP), deep capillary plexus (DCP), foveal avascular zone (FAZ), outer retina choriocapillaris (ORCC), choriocapillaris (CC), and choroid (CHR). Detection rates and statistical significance were analyzed using independent comparisons.

Results: SSOCTA demonstrated significantly higher detection rates across all parameters, compared to SDOCTA (P < 0.05 for all comparisons). In SCP, SSOCTA identified neovascularization in 42.5% of cases versus 22.5% with SDOCTA. For DCP, detection rates were 82.5% (SSOCTA) and 60.0% (SDOCTA). The most pronounced disparity occurred in FAZ (97.5% vs. 67.5%) and deeper layers: ORCC (95.0% vs. 52.5%), CC (95.0% vs. 50.0%), and CHR (95.0% vs. 50.0%).

Conclusions: SSOCTA demonstrates significantly superior performance over SDOCTA in evaluating neovascularization across retinal and choroidal layers in AMD patients.

Abstract No.: 200556
Comparison of 12-Month Real-World Outcomes of Faricimab Versus Aflibercept 2 mg for Treatment-Naïve Neovascular Age-Related Macular Degeneration (nAMD) in Australia

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Purpose: To provide clinically relevant insights into the real-world efficacy and safety of faricimab for treatment-naïve eyes with nAMD in routine clinical practice.

Methods: We conducted a prospectively designed observational study of data contributed by 22 Australian Fight Retinal Blindness! (FRB!) practitioners. Visual acuity, macular neovascularization activity, the number of injections and visits, and intervals between injections at 12 months were investigated and compared between faricimab versus aflibercept 2 mg.

Results: Visual outcomes of 143 eyes were remarkably similar to those of the TENAYA and LUCERNE pivotal clinical trials, with visual acuity improving 3.9 letters from a baseline of 62.8 and 48% of eyes attaining a dosing interval of ≥12 weeks. Eyes received a mean of 7.3 injections overall at 7.5 visits, indicating a strongly proactive treatment regimen. Most (71%) macular neovascular lesions had become inactive by 12 months. The 15% of eyes that

dropped out had worse vision to begin with and had not improved significantly. The small proportion (7%) of eyes that switched to another agent had improved vision but were mostly still active when they switched off faricimab. Eyes treated with faricimab had a significantly higher lesion inactivation rate, with significantly more reaching a final injection interval of ≥12 weeks compared with aflibercept 2 mg.

Conclusions: These findings from a high-fidelity observational dataset indicate that faricimab is safe and effective in real-world clinical practice for treating eyes with nAMD, with potentially a stronger and more durable early effect on nAMD lesion activity than aflibercept 2 mg.

Abstract No.: 200325
DAVIO 2 Phase 2 Clinical Trial

Results: Vision Outcomes With Bioerodible EYP-1901 (Vorolanib Intravitreal Insert) Versus Aflibercept in Previously-Treated Neovascular Age-Related Macular Degeneration (nAMD)

*First Author: Gemmy **CHEUNG***

Purpose: EYP-1901 (vorolanib intravitreal insert) is a bioerodible, sustained-release insert delivering vorolanib, a tyrosine kinase inhibitor (TKI) with pan–vascular endothelial growth factor receptor (pan-VEGFR) inhibition, for ≥6 months. This analysis focuses on the proportion of DAVIO 2 (NCT05381948) patients that maintained good vision at the primary endpoint.

Methods: Patients with previously-treated nAMD were randomized to EYP-1901 2 mg, EYP-1901 3 mg, or aflibercept 2 mg q8W. All received aflibercept 2 mg at day 1, week (W) 4, and W8, with EYP-1901 or sham administered at W8. All were eligible for supplemental aflibercept injections per prespecified best-corrected visual acuity (BCVA) and/or anatomic criteria; supplementation per investigator discretion was permitted. Primary endpoint was mean change in BCVA from day 1 to W28/32, averaged.

Results: A total of 156 eyes (EYP-1901 2 mg, n = 50; EYP-1901 3 mg, n = 52; aflibercept 2 mg, n = 54) were evaluated. Primary endpoint was met; mean BCVA change from baseline at W28/32 for EYP-1901 2 mg and 3 mg was statistically noninferior to aflibercept (mean [standard deviation, SD] letters +1.0 [6.4], +0.9 [4.2], +1.3 [6.8], respectively; difference vs. aflibercept -0.3, -0.4 letters [noninferiority margin: -4.5 letters]). Supplemental injections did not drive visual outcomes. At W28/32, similar proportions of eyes gained ≥5, ≥10, and ≥15 letters with EYP-1901 as with aflibercept. Fewer EYP-1901-treated eyes lost ≥10 letters vs. aflibercept. EYP-1901 maintained or improved vision in >80% of patients. EYP-1901 was well-tolerated, with no EYP-1901-related ocular or systemic serious adverse events.

Conclusions: One EYP-1901 dose maintained or improved vision in >80% of patients. Phase 3 trials (NCT06668064, NCT06683742) are assessing EYP-1901 with six-month redosing.

Abstract No.: 200557
Early Real-World Outcomes of Intravitreal Aflibercept 8 mg in Neovascular Age-Related Macular Degeneration (nAMD): A Multinational Retrospective Study From the Fight Retinal Blindness! (FRB!) Treatment Outcomes Registry

*First Author: Yohei **HASHIMOTO***
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Purpose: To evaluate the early clinical outcomes and safety of intravitreal aflibercept 8 mg for eyes with nAMD in real-world settings.

Methods: This retrospective, multinational study included eyes treated with aflibercept 8 mg in the FRB! registry. Patients were classified as treatment-naïve eyes and switchers. Switchers were defined as eyes that had had ≥3 injections, one of which was within three months before the first injection of aflibercept 8 mg. Outcomes included visual acuity (VA), lesion activity, injection frequency, and safety.

Results: Treatment-naïve eyes (n = 57; male 44%) were followed up for a mean of 14 weeks with a mean of 3.6 injections in 3.7 weeks. Mean VA significantly improved from 64.4 to 68.0 letters (P = 0.008), with lesion inactivation

observed in half of them. Switchers (n = 328; male 41%) were followed up for a mean of 19 weeks with a mean of 3.9 injections given in 3.9 visits. Mean VA remained stable (68.0 to 67.8 letters; P = 0.49), while an inactivation rate significantly increased from 38% to 49% (P < 0.001). Mean injection interval significantly extended from 7.1 to 7.5 weeks (P = 0.001). A third of switchers (113/328) switched from faricimab, with stable VA (mean, 66.6 to 65.6 letters), a stable injection interval (mean, 6.8 to 6.6 weeks) and a somewhat increased inactivation rate (34% to 45%). No ocular adverse events were observed in any eyes.

Conclusions: Aflibercept 8 mg was well tolerated and effective in eyes with nAMD in real-world practice.

Abstract No.: 200256
Early Versus Delayed Pegcetacoplan Treatment for Geographic Atrophy (GA) Secondary to Age-Related Macular Degeneration: 48-Month Results From OAKS, DERBY, and GALE Open-Label Extension Studies

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Purpose: To report the efficacy and safety of pegcetacoplan in GA patients focusing on early versus delayed treatment.

Methods: After the OAKS and DERBY studies, patients could enroll in the GALE open-label extension study. Patients in the early treatment group continued with the same pegcetacoplan regimen, either monthly (PM) or every other month (PEOM), in GALE. Patients in the delayed treatment group switched from sham treatment to active pegcetacoplan in GALE.

Results: Eighty-three percent of patients who completed the OAKS and DERBY studies entered GALE. In the first 24 months of GALE, pegcetacoplan reduced GA growth versus projected sham by 36% (PM) and 30% (PEOM) in nonsubfoveal (NSF) GA, and by 28% (PM) and 28% (PEOM) in the overall population (NSF + subfoveal). At month 48, the early treatment group had better outcomes, with 3.16 mm^2 of retinal tissue preservation compared to 1.11 mm^2 in the delayed treatment group for NSF GA. The safety profile during the first 24 months of GALE was consistent with the OAKS and DERBY studies, with no reported cases of vasculitis. Based on over 608,000 injections administered through March 2025, retinal vasculitis appears to be a first-injection phenomenon, with an estimated post-marketing rate of approximately 1 in 4,000 per first injection.

Conclusions: Long-term efficacy and safety of pegcetacoplan were demonstrated in GA patients with results supporting earlier treatment.

Abstract No.: 200453
Effectiveness and Safety of Faricimab in Eyes With Neovascular Age-Related Macular Degeneration (nAMD) and Diabetic Macular Edema (DME) Beyond Year 1: Results From the UK FARWIDE-nAMD and FARWIDE-DME Study

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Purpose: FARWIDE-nAMD and FARWIDE-DME are retrospective studies evaluating faricimab's durability, safety and visual acuity (VA) in nAMD and DME eyes, respectively, in the UK. Data for ≥18 months of follow-up are reported. Updated data will be presented.

Methods: Treatment-naïve eyes had no prior anti–vascular endothelial growth factor (anti-VEGF) treatment. Previously treated eyes switched from another anti-VEGF treatment to faricimab. Baseline characteristics, VA (using Early Treatment Diabetic Retinopathy Study [ETDRS] letters), injection frequency, intraocular inflammation (IOI), and presumed infectious endophthalmitis (PIE) were analyzed.

Results: The 18-month nAMD cohort included 1404 patients (1667 eyes; treatment-naïve = 332, previously treated = 1335). 84% previously treated eyes switched to faricimab from aflibercept 2.0 mg. In treatment-naïve eyes, median (Q1,Q3) VA was 61 (47,70) and 65 (46,76) ETDRS letters at baseline and 18 months, respectively. In previously treated eyes, median VA remained stable. The mean (SD) injections were 4.8 (0.5), 2.2 (1.0), 1.9 (1.1) in treatment-naïve, and 4.4 (0.9), 3.0 (1.1), 2.8 (1.2) in previously treated eyes in months 1–6, 7–12, 13–18, respectively. The 18-month DME cohort included 305 patients (416 eyes; treatment-naïve = 122, previously treated = 294). 87% previously treated eyes switched to faricimab from aflibercept 2.0 mg. The median change in VA (Q1,Q3) from baseline to 18 months was +5 (-1,9) letters in treatment-naïve eyes; VA remained stable over 18 months in previously treated eyes. The mean (SD) injections were 4.4 (1.0), 1.8 (1.2), 1.3 (1.1) in treatment-naïve and 4.3 (1.1), 2.5 (1.3), 2.2 (1.5) in previously treated eyes in months 1–6, 7–12, and 13–18, respectively. Overall IOI and PIE rates were consistent with faricimab phase 3 trials.

Conclusions: In both trials, faricimab treatment over 18 months led to improved VA in treatment-naïve eyes, stable VA in previously treated eyes, greater treatment interval extensions, and consistent safety data supporting faricimab's real-world effectiveness, durability, and safety.

Abstract No.: 200189
Effectiveness of Rheopheresis for Age-Related Macular Degeneration (AMD): A Systematic Review and Meta-analysis

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Purpose: To evaluate the effectiveness of rheopheresis for AMD.

Methods: Our protocol was registered on PROSPERO (CRD420251046426). We conducted a comprehensive search of PubMed, Web of Science, Cochrane, and Scopus for clinical trials evaluating rheopheresis in patients with dry AMD, published up to February 1, 2025. Primary outcomes included best-corrected visual acuity (BCVA), retinal pigment epithelial detachment (RPED) area, and rheological parameters. Random-effects models were used to calculate mean differences with 95% confidence intervals (CI) for continuous outcomes and risk differences for dichotomous outcomes. Evidence certainty was assessed using the GRADE methodology.

Results: Nine studies with 527 participants (291 rheopheresis, 236 controls) were included. Follow-up duration ranged from 1 to 5 years. Rheopheresis significantly improved BCVA compared to controls at initial (-0.04 logMAR; 95% CI: -0.07 to -0.00; I^2 = 0%) and final follow-up (-0.13 logMAR; 95% CI: -0.17 to -0.09; I^2 = 20.5%). Treatment increased the probability of gaining ≥1 line (RD = 0.17; 95% CI: 0.08 to 0.26) and ≥2 lines (RD = 0.11; 95% CI: 0.03 to 0.18) of visual acuity, while reducing risk of visual deterioration (RD = -0.30; 95% CI: -0.46 to -0.14). RPED area decreased significantly (-5.28 mm^2; 95% CI: -8.36 to -2.21). Substantial reductions were observed in total cholesterol (56%), low-density lipoprotein cholesterol (68%), lipoprotein(a) (48%), apoprotein B (67%), immunoglobulin M (65%), fibrinogen (62%), and α2-macroglobulin (56%), while plasma and blood viscosity each decreased by 11%.

Conclusions: Rheopheresis significantly improves visual acuity and reduces RPED area in dry AMD patients through substantial modulation of hemorheological parameters.

Abstract No.: 200456
Faricimab for Choroidal Neovascularization (CNV) due to Angioid Streaks: Week 48 Results From the Phase 3 NIHONBASHI Trial

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Purpose: To report week 48 results from the phase 3, open-label, single-arm NIHONBASHI

trial (jRCT2071220090) of faricimab for patients with CNV due to angioid streaks in Japan.

Methods: Patients with CNV due to angioid streaks (n = 24) received intravitreal faricimab 6 mg every four weeks until week 12, followed by pro re nata dosing. Visual and anatomic outcomes, and safety were evaluated throughout.

Results: Adjusted mean (90% confidence interval [CI]) best-corrected visual acuity gains from baseline at week 12 (+5.8 letters [+2.9 to +8.6]), the primary endpoint, were maintained through week 48 (+7.3 letters [+4.5 to +10.0]). Mean (90% CI) reductions from baseline in central subfield thickness at week 12 (–106.4 µm [–123.3 to –89.6]) were also maintained through week 48 (–103.8 µm [–122.6, –85.0]). The median (minimum, maximum) number of faricimab injections through week 48 was 6.5 (3, 13). Faricimab was generally well-tolerated; the safety profile was consistent with that for other indications.

Conclusions: Visual acuity gains with faricimab at week 12 in patients with CNV due to angioid streaks were maintained through week 48 in NIHONBASHI. Faricimab was well tolerated.

Abstract No.: 200449
Faricimab for Polypoidal Choroidal Vasculopathy (PCV): One-Year Results From the Phase 3b/4 SALWEEN Trial

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Purpose: Faricimab, a dual angiopoietin-2/vascular endothelial growth factor A (Ang-2/VEGF-A) inhibitor, is the first bispecific antibody for intraocular use. Week 16 (W16) results from phase 3b/4, multicenter, open-label SALWEEN (ISRCTN69073386) trial in Asian patients with PCV showed rapid and robust disease improvement with faricimab. One-year efficacy, safety, and durability of faricimab in this population will be updated.

Methods: Patients with macular PCV (N = 135) received four initial Q4W (every 4 weeks) doses of faricimab 6.0 mg, followed by Q8W/Q12W/Q16W based on disease activity assessments at W20/W24. At W44/W48 through W104, patients followed treat-and-extend-based regimens (Q8W–Q20W). Primary endpoint is change from baseline in best-corrected visual acuity (BCVA) averaged over W40–W48.

Results: The mean (standard deviation [SD]) patient age is 68.6 (8.3) years; 63% (85/135) are male. Mean (SD) baseline ocular characteristics are: BCVA: 64.4 (11.3) letters; central subfield thickness (CST): 417.0 (155.2) µm; polypoidal lesion area: 0.25 (0.26) mm^2; total lesion area: 8.1 (6.8) mm^2. At W16, adjusted mean (95% confidence interval [CI]) changes from baseline in BCVA and CST were +7.7 (+6.3,+9.1) letters and -142.2 (-157.7,-126.7) µm, respectively. At W16, 80.3% (95% CI: 73.8–87.1) patients had no intraretinal/subretinal fluid. Among patient eyes with baseline polypoidal lesions confirmed by the central reading center and examined at W16, 51.0%(51/100) had complete closure of polypoidal lesions and 86.0% had inactive polypoidal lesions. Faricimab is well tolerated through W16 with no new safety concerns. One-year results, including BCVA, CST changes, regressed/inactive polypoidal lesions, treatment durability (Q4W/Q8W/Q12W/Q16W/Q20W interval assignments), and safety will be presented.

Conclusions: One-year results from SALWEEN will elucidate long-term efficacy, safety, and durability of dual Ang-2/VEGF-A inhibition with faricimab in Asian patients with PCV.

Abstract No.: 200448
Four-Year Outcomes of Faricimab in Neovascular Age-Related Macular Degeneration (nAMD): Safety and Efficacy Results From the AVONELLE-X Long-Term Extension Trial

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Purpose: We present findings from the two-year, phase-3 AVONELLE-X long-term extension trial (NCT04777201), which evaluated the long-term safety (primary objective) and efficacy (exploratory objective) of faricimab in nAMD patients who completed either of the two-year, phase-3 TENAYA (NCT03823287) / LUCERNE (NCT03823300) trials without study treatment discontinuation.

Methods: TENAYA/LUCERNE patients received faricimab 6 mg up to every 16 weeks (Q16W) or aflibercept 2 mg Q8W. All AVONELLE-X patients received faricimab 6 mg up to Q16W using a protocol-defined treat-and-extend (T&E) regimen based on the TENAYA/LUCERNE algorithm. AVONELLE-X had first 12 weeks of masked monthly visits, followed by open-label study visits required only when faricimab was due — at intervals determined by the T&E algorithm.

Results: Overall, 1029/1188 (86.6%; faricimab – T&E, n = 524; faricimab – T&E [prior aflibercept], n = 505) eligible patients enrolled in AVONELLE-X and 868 (84.4%) completed AVONELLE-X. Faricimab was well tolerated; only 2.1% discontinued due to adverse events (AEs). AEs were consistent with faricimab's known safety profile; intraocular inflammation occurred in 2.0%, with no cases of retinal vasculitis or retinal occlusive vasculitis. Best-corrected visual acuity remained stable over two years, with 75% patients with ≥20/40 vision at week 48 in TENAYA/LUCERNE maintaining it at the end of AVONELLE-X. Central subfield thickness improvements observed in TENAYA/LUCERNE were maintained for additional two years in AVONELLE-X. At the end of four years, 78.2% of patients were on extended (≥Q12W) faricimab dosing and 63.9% were on Q16W dosing.

Conclusions: AVONELLE-X is the largest nAMD extension study to date. This first report on long-term results with faricimab up to Q16W in nAMD patients confirm its safety, efficacy, and durability over four years.

Abstract No.: 200597
From Prevalence to Precision: Targeting the Top Causes of Retinitis Pigmentosa (RP) in East Asia

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Purpose: Most gene therapy efforts for RP are tailored to European or North American genotypes. We sought to identify high-prevalence RP variants unique to East Asian populations that together account for a substantial global disease burden, and which merit prioritization for targeted therapy.

Methods: We analyzed a prospective registry of RP patients of Southern Chinese ancestry in Singapore. Three recurrent variants—EYS c.6416G>A p.(Cys2139Tyr), SAG c.442G>A p.(Gly148Arg), and USH2A c.2802T>G p.(Cys934Trp)—were evaluated for allele frequency, phenotypic impact, and regional concentration. Founder effects were assessed through haplotype analysis and compared with global population datasets.

Results: SAG p.(Gly148Arg) is a novel dominant founder variant, traceable to Guangdong and Hainan provinces in China, and is the most prevalent cause of dominant RP in Singapore. EYS p.(Cys2139Tyr) and USH2A p.(Cys934Trp) are even more common, accounting for more than 10% of all RP cases. Together, these three variants likely account for a large proportion of RP cases globally, concentrated almost entirely in East Asian populations.

Conclusions: These founders represent a major unaddressed therapeutic opportunity. Their high prevalence, clear pathogenicity, and regional specificity make them ideal candidates

for mutation-targeted therapies. Prioritizing these alleles could dramatically expand the global reach of retinal gene therapy and deliver near-term impact for many underserved patients in Asia.

Abstract No.: 200447
Greater Anatomical Improvements With Faricimab Versus Aflibercept 8 Weeks After Injections: A TENAYA/LUCERNE Post-Hoc Analysis

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Purpose: The TENAYA/LUCERNE (NCT03823287/NCT03823300) post-hoc analysis evaluated anatomic outcomes for faricimab versus aflibercept at a longer duration after dosing, specifically eight weeks after each injection during the maintenance phase in treatment-naïve neovascular age-related macular degeneration (nAMD) patients.

Methods: Treatment-naïve nAMD patients (pooled N = 1,329) were randomized to faricimab 6.0 mg (n = 665; Q8W [every 8 weeks] up to Q16W after four initial Q4W doses) or aflibercept 2.0 mg (n = 664; Q8W after three initial Q4W doses) through two-years maintenance phase. Change from baseline in central subfield thickness (CST), maximum pigment epithelial detachment (PED) thickness, and proportion of patients with retinal fluid resolution were compared eight weeks after injections #4–#9. All P-values are nominal.

Results: Faricimab-treated patients had greater anatomic improvements eight weeks after injections versus aflibercept-treated patients. Adjusted least square mean changes in CST (95% confidence interval [CI]) were: injection #4 – faricimab: n = 621; -176.4 (-183.9, -168.9) vs aflibercept: n = 571; -154.2 (-161.8, -146.6) µm, P < 0.0001; injection #9 – faricimab: n = 503;-187.6 (-195.6, -179.7) vs aflibercept: n = 526; -170.9 (-178.9, -163.0) µm, P = 0.0037. Adjusted least square mean changes in corresponding maximum PED thickness (95% CI) were: injection #4 – faricimab: n = 614; -74.2 (-82.2, -66.2) vs aflibercept: n = 568; -57.4 (-65.6, -49.3) µm, P = 0.0038; injection #9 – faricimab: n = 311; -80.2 (-89.4, -71.1) vs aflibercept: n = 275; -62.2 (-71.4, -53.1) µm, P = 0.0061. A higher proportion (95% CI) of faricimab-treated patients had subretinal and intraretinal fluid absence eight weeks after injections vs aflibercept-treated patients: injection #4 – faricimab: n = 626; 63.4% (59.7%, 67.1%) vs aflibercept: n = 572; 46.6% (42.6%, 50.6%), P < 0.0001; injection #9 – faricimab: n = 502; 64.6% (60.5%, 68.6%) vs aflibercept: n = 527; 50.3% (46.1%, 54.5%), P < 0.0001.

Conclusions: Faricimab demonstrated greater improvements in CST, maximum PED thickness, and fluid resolution versus aflibercept eight weeks after injections during maintenance phase in TENAYA/LUCERNE, when most faricimab-treated patients were on extended (≥Q12W) dosing.

Abstract No.: 200171
Impact of Age-Related Eye Disease Study (AREDS) Oral Micronutrient Supplementation on Geographic Atrophy (GA) Progression: Insights From Phase 3 OAKS and DERBY Trials

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Purpose: To assess if AREDS micronutrient supplementation intake affects overall GA growth, growth toward the fovea, or efficacy of pegcetacoplan in eyes with GA due to age-related macular degeneration.

Methods: This analysis included untreated eyes from the modified intent-to-treat population of the OAKS and DERBY trials, grouped by baseline AREDS use. Changes in GA distance to the foveal center and square root–transformed GA size based on fundus autofluorescence and optical coherence tomography imaging at month 24 were compared. Pegcetacoplan-treated eyes were also analyzed to determine if AREDS intake influenced treatment efficacy.

Results: Among 1259 untreated GA eyes, 518 were on AREDS and 741 were not. No significant difference in GA growth toward the fovea was observed between AREDS (n = 226) and non-AREDS (n = 290) eyes (0.181 mm vs. 0.168 mm, P = 0.50). Overall GA growth was similar between AREDS and non-AREDS eyes (0.667 mm vs. 0.633 mm, P = 0.12). Among pegcetacoplan-treated eyes, there was no meaningful difference in GA growth between AREDS and non-AREDS groups (0.506 mm vs. 0.524 mm for monthly, P = 0.50; 0.559 mm vs. 0.526 mm for every other month, P = 0.23).

Conclusions: AREDS did not affect GA growth toward the fovea, overall GA growth, nor efficacy of pegcetacoplan in GA eyes.

Abstract No.: 200553
Incidence of Macular Neovascularization (MNV) and Geographic Atrophy (GA) in Fellow Eyes of Neovascular Age-Related Macular Degeneration (nAMD) Patients: A Three-Year Study in an Asian Cohort

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Purpose: To evaluate the three-year incidence of MNV and GA in the fellow eyes of patients with nAMD in an Asian population.

Methods: This retrospective study included patients diagnosed with nAMD between December 2015 and March 2017 who completed three years of follow-up. Fellow eyes with other risk factors for MNV or atrophy (such as high myopia and central retinal vein occlusion), prior nAMD or GA, or no fundus view were excluded. Optical coherence tomography (OCT) assessed the development of MNV, defined as new onset of subretinal or intraretinal fluid, subretinal hyperreflective material, or retinal pigment epithelium (RPE) elevation consistent with nAMD, and GA, defined as complete RPE and outer retinal atrophy.

Results: Of 153 patients reviewed, 113 completed follow-up, and 89 fellow eyes met the inclusion criteria. The mean (standard deviation [SD]) age was 69.9 (8.04) years, 57% were male. Index eyes included polypoidal choroidal vasculopathy (PCV; 64%), type 1 MNV (28%), type 2 (6%), and type 3 (2%). The mean subfoveal choroidal thickness was 232.3 µm (SD 93.8). At three years, seven (8%) fellow eyes developed new MNV, and three (3%) developed new GA. MNV was associated with baseline hard drusen/RPE irregularities (86% vs. 42%, P = 0.04) and greater ellipsoid zone (EZ0 loss (43% vs. 11%, P = 0.04). GA was associated with baseline soft drusen, RPE migration (P = 0.02), and EZ loss (67%, P = 0.04).

Conclusions: In this cohort, fellow-eye MNV and GA incidence were lower than in Western populations, potentially reflecting higher PCV prevalence and lower drusen burden.

Abstract No.: 200538
Incomplete Retinal Pigment Epithelium and Outer Retina Atrophy (iRORA) Phenotype Characterization Using Fundus Autofluorescence (FAF): GATHER2 Post-Hoc Analysis for Geographic Atrophy (GA) Secondary to Age-Related Macular Degeneration (AMD)

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Purpose: iRORA is a precursor of GA. While iRORA is defined by optical coherence tomography (OCT)–based findings, adding information from other imaging modalities could explain the heterogeneity in progression of these lesions. We aimed to identify FAF phenotypes characterizing iRORA, and those associated with conversion from iRORA to complete lesions (cRORA).

Methods: In this GATHER2 post-hoc analysis (NCT04435366, avacincaptad pegol vs. sham for GA), pooled eyes were analyzed for baseline iRORA beyond GA borders, and each iRORA region was assessed for progression to cRORA at month (M) 6, 12, and 18 using OCT.

For each OCT-identified lesion, FAF patterns were defined as "none" (no autofluorescence abnormalities), not classifiable, increased autofluorescence (IAF), questionably decreased (QDAF), or definite decreased (DDAF).

Results: Overall, 153 iRORA from 95 eyes were identified at baseline, and most demonstrated none (34.6%; n = 53) or QDAF (34.6%; n = 53) patterns. A smaller proportion exhibited a DDAF pattern (7.2%; n = 11). At M18, the proportion of iRORA manifesting QDAF and DDAF patterns increased to 38.1% and 23.0%, respectively; the "none" pattern decreased to 16.8%. At M18, most lesions that remained as iRORA demonstrated either none (52.8%) or QDAF (49.1%). iRORA that converted to cRORA by M18 were more likely to have more advanced FAF abnormalities, with 44.4% having IAF, 30.2% QDAF, and 27.3% DDAF.

Conclusions: Findings from this large study characterizing FAF phenotypes of iRORA highlight the heterogeneity of these lesions and the association of the multimodal phenotype on progression over time.

Abstract No.: 201177
Injection Frequency Based on Baseline Anatomic Lesion Type in Subfoveal Neovascular Age-Related Macular Degeneration (nAMD): A HARBOR Post-Hoc Analysis

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Purpose: To quantify and compare injection frequency based on the Consensus on Neovascular Age-Related Macular Degeneration Nomenclature (CONAN) lesion types in patients with nAMD treated with ranibizumab.

Methods: This post-hoc analysis evaluated patients in the pro re nata (PRN) ranibizumab arm of the phase 3 HARBOR trial (NCT00891735). Injection burden over 24 months was compared across baseline lesion subtypes: Type 1, Mixed Type 1/2, and Type 3. High injection burden was defined as >7 injections at month 12 and 16–24 injections by month 24. Chi-square tests and logistic regression assessed associations between lesion type, anatomical biomarkers, and injection frequency.

Results: At month 12, lesion type significantly correlated with injection burden (P = 0.00112). Higher injection frequency was observed in Type 1 and Type 2 compared to Type 3 lesions. Among Type 2 lesions, subretinal fluid (SRF) at baseline was associated with higher injection burden (odds ratio [OR] = 3.1; 95% confidence interval [CI]: 1.1–8.6). Hemorrhage correlated with fewer injections (OR = 0.35; 95% CI, 0.1–0.8). At month 24, 16–24 injections were more common in Type 1 and Type 2 compared to Type 3. SRF remained predictive of higher injection burden for Type 2, while hemorrhage continued to be associated with fewer injections.

Conclusions: Type 3 lesions required fewer injections over 24 months compared to Types 1 and 2. Baseline lesion type and biomarkers such as SRF and hemorrhage may help guide individualized treatment strategies in nAMD.

Abstract No.: 200235
Interim Analysis From a Phase 3 Study of Oral Tinlarebant in Childhood-Onset Stargardt Disease (STGD1) (DRAGON)

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Purpose: Tinlarebant is an antagonist of retinol binding protein 4, the vehicle for vitamin A transport to the eye. Findings from an interim analysis of the DRAGON study, a 2-year, Phase 3, randomized, double-masked, placebo-controlled study of tinlarebant in adolescent patients with STGD1, are presented.

Methods: DRAGON enrolled 104 patients aged 12 to 20 years with a confirmed diagnosis of STGD1. All enrolled patients had an aggregate atrophic lesion size of 0.05-7.62 mm² and best-corrected visual acuity of ≥20/200. Change in

atrophic lesion size was the primary endpoint. DRAGON included an adaptive design, which allowed a sample size increase if a treatment effect within a statistical "promising zone" was observed. The interim analysis was conducted by an independent Data Safety Monitoring Board (DSMB) once all subjects had completed the one-year assessments.

Results: By the time of the interim analysis, 87 (84%) of subjects had completed month 16. Visual function was stable under both standard and low luminance. Anticipated adverse events (AEs), chromatopsia and delayed dark adaptation, were mild and transient; withdrawal was 3.8%. The DSMB recommended that the study proceed without modification and that the data should be submitted for regulatory review, indicating efficacy beyond the "promising zone".

Conclusions: Interim data from DRAGON showed that tinlarebant is safe and well-tolerated. Drug-related AEs were mild and anticipated based on the mechanism of tinlarebant action; visual acuity was stable throughout the study period. The favorable safety profile and DSMB recommendation to seek regulatory review suggest a promising outcome for the DRAGON study.

Abstract No.: 200896
Long-Term Efficacy and Safety of the Port Delivery Platform With Ranibizumab (PDS) in Patients With Neovascular Age-Related Macular Degeneration (nAMD): Results From the Ladder and Archway to Portal Trials

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Purpose: Ladder and Archway investigated the PDS in patients with nAMD. We reported follow-up data up to seven and five years.

Methods: Patients were randomized to the PDS (Ladder [NCT02510794]: 10, 40 or 100 mg/mL refilled pro re nata; Archway [NCT03677934]: 100 mg/mL refilled every 24 weeks [Q24W]) or monthly intravitreal (IVT) ranibizumab 0.5 mg. On primary study completion, patients were eligible to enter the Portal trial (NCT03683251) to receive PDS 100 mg/mL Q24W (PDS Q24W and IVT-to-PDS [IVT-PDS] cohorts). Baseline is defined as day 0 of the primary study.

Results: In the Ladder-to-Portal 100 mg/mL cohort (PDS Q24W, n = 59; IVT-PDS, n = 41), the mean best-corrected visual acuity at baseline and week 320 (W320) was 70.4 and 63.2 letters for PDS Q24W; 70.6 and 68.4 letters for IVT-PDS. Mean central subfield thickness (CST) at baseline and W320 was 315.6 and 308.6 µm for PDS Q24W; 325.8 and 301.7 µm for IVT-PDS. In the Archway-to-Portal cohort (PDS Q24W, n = 220; IVT-PDS, n = 132), mean BCVA at baseline and week 240 (W240) was 74.4 and 67.6 letters for PDS Q24W; 76.3 and 68.6 letters for IVT-PDS. The mean CST at baseline and W240 was 308.8 and 306.4 µm for PDS Q24W; 300.6 and 289.3 µm for IVT-PDS. PDS treatment was generally well tolerated over the respective study periods.

Conclusions: Continuous anti-VEGF treatment via the PDS resulted in maintenance of visual and anatomical long-term outcomes for up to seven and five years in nAMD patients and was generally well tolerated.

Abstract No.: 200132
Long-Term Treatment Outcomes and Predictive Factors for Myopic Choroidal Neovascularization (mCNV) Treated With Anti–Vascular Endothelial Growth Factor (Anti-VEGF): A Real-World Experience in Taiwan

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Purpose: To investigate the long-term outcomes and predictive factors of anti-VEGF treatment for mCNV within a real-world Taiwanese cohort.

Methods: Eyes treated with intravitreal bevacizumab, ranibizumab, or aflibercept for mCNV between February 2007 and October 2021 were retrospectively recruited. Best-

corrected visual acuity (BCVA) and central foveal thickness (CFT) measured with optical coherence tomography were collected at baseline, 3 and 6 months, and annually up to 9 years. Linear regression was used to identify predictors of BCVA at 1 and 5 years.

Results: This study included 275 eyes with a mean follow-up duration of 50.5 months. The average number of injections in the first year was 2.39 ± 1.55. BCVA significantly improved during the first 3 years, but no significant improvements were observed from 4 to 9 years. Poorer BCVA at 5 years was associated with longer axial length, worse baseline and follow-up BCVA, pseudophakia, higher initial and final myopic maculopathy categories, baseline vitreomacular traction, and atrophy at the last follow-up visit. Protective factors included baseline retinal hemorrhage and greater CFT at 3 to 5 years. At the final follow-up, aflibercept-treated eyes had more cases of category 4 myopic maculopathy, while ranibizumab-treated eyes had fewer.

Conclusions: In this real-world setting, fewer injections were administered than in clinical trials. Visual gains were maintained for 3 years but not beyond. Early treatment may help preserve long-term visual function.

Abstract No.: 200442
MyDR-Detection: An Explainable Artificial Intelligence (XAI) System for Automated Diabetic Retinopathy (DR) Detection

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Purpose: MyDR-Detection was developed as an artificial intelligence (AI)–based detection tool that integrates computer vision and natural language reasoning to provide accessible, affordable, and explainable DR diagnosis for health care providers in resource-limited settings.

Methods: Built on the OpenAI platform, MyDR-Detection employs a novel AI-engineering framework that combines visual pattern recognition with large language models (LLMs) trained to emulate clinical reasoning. The system was trained using a curated dataset of 90 labeled retinal fundus images followed by iterative supervised learning optimization and structured clinical knowledge to support contextual decision-making. Three internal test trials were performed using separate, non-overlapping datasets to evaluate diagnostic performance.

Results: Across all trials, the system achieved an average accuracy of 88.9%, sensitivity of 83.9%, specificity of 90.9%, positive predictive value (PPV) of 87.0%, negative predictive value (NPV) of 85.9%, and an area under the curve (AUC) of 0.86. MyDR-Detection consistently produced DR/non-DR classifications accompanied by clinically aligned reasoning within 30–45 seconds per case.

Conclusions: MyDR-Detection shows promising diagnostic performance and clinical interpretability. While challenges remain in detecting mild DR case, this early-phase system offers a novel and scalable foundation for future development of XAI in diabetic retinopathy detection.

Abstract No.: 201045
Ocular Effects of Bilateral Hypotony Secondary to Chronic Dehydration

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Purpose: To present a case of a 15-year-old female admitted for severe dehydration, who presented with painless and progressive blurring of vision in both eyes for two weeks.

Methods: Ophthalmologic findings included significant visual acuity loss, with only up to counting fingers, JII on both eyes. Slit-lamp examination showed signs of hypotony, such as full-thickness corneal folds. Intraocular pressure (IOP) was 0 mmHg in both eyes, and fundus examination showed evidence of maculopathy – optic disc edema, tortuous retinal vessels, and macular folds. Further investigation led to the diagnosis of distal renal tubular acidosis. Aggressive correction of the hypovolemic state

and electrolyte imbalance was initiated, which led to the gradual improvement of visual acuity, IOP, and other signs of hypotony.

Results: By the sixth day, visual acuity showed partial improvement, but bilateral posterior subcapsular cataracts developed and signs of chorioretinopathy remained. Optical coherence tomography (OCT) revealed foveal detachment in the right eye and retinal undulations in both eyes. By day 17, electrolyte levels were nearly corrected, with best-corrected visual acuity of 20/20, J1+. Corneal folds resolved, and IOP reached normal limits, but posterior lens opacity remained. Fundus examination showed improving maculopathy, which was confirmed by repeat OCT, showing no foveal detachment and minimal retinal pigment epithelium undulations. The patient was discharged with a regimen to manage her electrolyte imbalance.

Conclusions: This case emphasizes the importance of early recognition and management of ocular hypotony in the event of severe dehydration and electrolyte imbalance, highlighting the excellent visual prognosis with appropriate treatment.

Abstract No.: 200981
PRISM Phase 2b Clinical Trial Evaluating Intravitreal 4D-150 3E10 vg/eye in Adults With Neovascular Age-Related Macular Degeneration (nAMD): 52-Week Results

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Purpose: 4D-150 is an investigational intravitreal genetic medicine encoding aflibercept and an inhibitory miRNA sequence targeting vascular endothelial growth factor C (VEGFC). We reported week 52 safety and efficacy results from the Phase 2b 3E10 vg/eye cohort in the multicenter, open-label PRISM (NCT05197270) clinical trial.

Methods: The PRISM Phase 2b cohort includes patients diagnosed with nAMD and who had best-corrected visual acuity (BCVA) of 34–83 letters. There was no requirement for central subfield thickness (CST). Participants received aflibercept 2 mg on days -7 and 28, and a single injection of 4D-150 at the planned Phase 3 dose (3E10 vg/eye, n = 30) or 1E10 vg/eye (n = 15) on day 1.

Results: At 52 weeks, participants enrolled in the 3E10 group experienced no treatment-related serious adverse events. Their mean cumulative number of supplemental injections was 0.97, with 57% of participants free of supplementation and 70% receiving ≤1 supplemental injection. The mean change from baseline in BCVA was +2.2 ± 7.1 Early Treatment Diabetic Retinopathy Study (ETDRS) letters, and the mean change in CST was –11.0 ± 66.2 µm. Similar results were observed in recently diagnosed participants (≤6 months, n = 15), with mean changes from baseline of +3.1 ± 8.5 ETDRS letters and –10 ± 56.6 µm in BCVA and CST, respectively.

Conclusions: Week 52 results from the PRISM Phase 2b population extension cohort demonstrated that 4D-150 3E10 vg/eye was well tolerated and resulted in stable visual acuity, durable anatomic control, and a meaningful reduction in anti-VEGF injection burden in nAMD patients.

Abstract No.: 200595
PULSAR Extension: Clinical Improvements Through 156 Weeks With Aflibercept 8 mg in Patients With Macular Neovascularization (MNV) and Polypoidal Choroidal Vasculopathy (PCV)

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Purpose: To present clinical outcomes with aflibercept 8 mg in PULSAR Extension in patients with neovascular age-related macular degeneration grouped by main study baseline (BL) MNV type or PCV presence.

Methods: At week (W) 96 of PULSAR (NCT04423718), patients originally assigned to aflibercept 2 mg were switched to 8 mg (2q8-to-8mg group), and those assigned to aflibercept 8 mg continued to receive 8 mg (8 mg group) through W156.

Results: In PULSAR Extension, 58.4% (n = 365) had MNV type 1, 20.0% (n = 125) type 2, and 19.8% (n = 124) mixed; 85/169 patients tested had indocyanine green angiography–confirmed PCV. Absolute mean best-corrected visual acuity (BCVA; letters) at BL and W156 was 64.1 and 68.6 (type 1), 50.3 and 56.5 (type 2), 56.4 and 64.5 (mixed), and 58.7 and 69.2 (PCV) in the 2q8-to-8mg group (n = 208), and 64.2 and 68.3 (type 1), 54.9 and 58.1 (type 2), 57.1 and 59.0 (mixed), and 56.8 and 61.9 (PCV) in the 8 mg group (n = 417). Absolute mean central subfield retinal thickness (CRT; µm) at BL and W156 was 384 and 277 (type 1), 479 and 283 (type 2), 456 and 263 (mixed), and 449 and 258 (PCV) in the 2q8-to-8mg group, and 399 and 269 (type 1), 466 and 304 (type 2), 438 and 263 (mixed), and 460 and 261 (PCV) in the 8 mg group.

Conclusions: In PULSAR Extension, clinical improvements in BCVA and CRT were observed through W156 in patients grouped by BL MNV type or PCV presence.

Abstract No.: 200947
PULSAR Extension: Pigment Epithelial Detachment (PED) Outcomes in Patients With Neovascular Age-Related Macular Degeneration (nAMD) Receiving or Switching to Aflibercept 8 mg

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Purpose: To assess PED outcomes in patients with nAMD in the optional one-year extension phase through week 156 of PULSAR (PULSAR Extension).

Methods: In the PULSAR Extension, patients on aflibercept 2q8 were switched to 8 mg at week 96 (2q8-8 mg group, n = 208). Patients in the 8q12 and 8q16 groups continued aflibercept 8 mg at their last assigned dosing interval (8 mg group, n = 417). Presence and thickness of subretinal pigment epithelium fluid (representative of serous PED) were assessed.

Results: In the 2q8-8mg group, the proportions of patients with serous PED decreased from 19.3% at week 96 to 15.3% at week 100 after the first aflibercept 8 mg injection, and remained at 15.1% at week 156. In the 8 mg group, the proportions of patients with serous PED were similar from week 96 (14.4%) to week 156 (15.6%). In patients with serous PED involving the foveal center at baseline, the mean thickness of serous PED decreased from week 96 to week 156 (2q8-8 mg group [n = 24], 49 µm to 8 µm; 8 mg group [n = 52], 26 µm to 14 µm).

Conclusions: PED outcomes improved from week 96 to week 156 in patients who switched from aflibercept 2 mg to 8 mg, and were generally maintained in patients who continued receiving aflibercept 8 mg.

Abstract No.: 200372
Peripheral Retinal Hemorrhage Density on Ultra-Widefield (UWF) Imaging as a Novel Biomarker for Predicting Diabetic Retinopathy (DR) Progression: A Two-Year Longitudinal Study in Asians

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Purpose: To evaluate whether predominantly peripheral lesions (PPLs) and other imaging biomarkers on UWF photography can predict the progression of DR in a multiethnic Asian cohort.

Methods: This was a prospective, longitudinal cohort study involving 282 participants (528 eyes) with diabetes and either no DR or non-proliferative DR, recruited from the Singapore National Eye Center between July 2017 and May 2021. Participants underwent annual UWF color fundus photography and systemic evaluations over a two-year period. Images were graded at a centralized reading center. An automated lesion detection algorithm was used for objective quantification of

microaneurysms and retinal hemorrhages. Multivariate regression analysis was conducted to identify independent predictors of DR progression, adjusting for systemic and ocular risk factors. The primary outcome was DR progression, defined as a ≥2-step worsening on the DR severity scale (DRSS) or development of proliferative DR within two years.

Results: The two-year progression rate of DR was 9.85%. Independent predictors of progression included increased peripheral retinal hemorrhage density (odds ratio [OR] = 3.09; P = 0.044), presence of PPLs (OR = 4.00; P = 0.040), and higher baseline diastolic blood pressure (OR = 1.04; P = 0.015). Eyes with PPLs had a 1.6-fold higher risk of progression, compared to eyes with predominantly central lesions.

Conclusions: Peripheral biomarkers on UWF imaging, including peripheral retinal hemorrhage density and PPLs, are independent predictors of DR progression. These findings support the clinical utility of peripheral retinal assessment and automated artificial intelligence–based imaging tools in DR risk stratification and management.

Abstract No.: 200532
Potential Therapeutic Effect of Angiopoetin-2/Vascular Endothelial Growth Factor-2 (Ang-2/VEGF-2) Inhibition on Nonarteritic Anterior Ischemic Optic Neuropathy (NAION): A Rat Anterior Ischemic Optic Neuropathy (rAION) Model Pilot Study

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Purpose: NAION causes rapid vision loss with limited effective treatments. This preclinical pilot study evaluated the neuroprotective effects of dual Ang-2/VEGF-2 inhibition on optic nerve (ON) in rAION (rat model of NAION).

Methods: For rAION, adult male rats were induced by photodynamic therapy. Thirty rats were randomly assigned to sham control group (n = 10, laser in eyes without rose Bengal exposure), intravitreal immunoglobulin-G monoclonal-antibody (IgG-mAb, 5 µL/eye, n = 10), and 5 µL anti-VEGF/Ang-2 antibody (n = 10). Overall visual circuit integrity, retinal ganglion cells (RGC) density (1-3 mm from ON-head), and tight junction preservation/repair and blood-optic nerve barrier (BOB) integrity, were assessed using flash visual-evoked potentials (fVEP), retrograde fluorogold labeling, and Evans blue extravasation assay, respectively, 28 days after ON infarction. Data were presented as mean ± standard deviation with statistical significance if P < 0.05.

Results: Significant improvements in functional visual circuitry and RGC survival were observed 28 days following anti-VEGF/Ang-2 antibody administration. fVEP amplitudes of P1-N2 (first positive-second negative peak) were significantly greater with anti-VEGF/Ang-2 antibody versus IgG-mAb (36.17 ± 13.72 µV vs. 30.96 ± 6.51 µV; P < 0.05). RGC densities were considerably higher with anti-VEGF/Ang-2 antibody versus IgG-mAb (1675 ± 269/mm2 vs. 834 ± 305/mm2; P < 0.05). The Evans blue staining assay demonstrated anti-VEGF/Ang-2 antibody–treated rat eyes had markedly reduced leakage of Evans blue dye compared with IgG-mAb, suggesting effective preservation of BOB integrity.

Conclusions: These preliminary findings demonstrated that following rAION-induced damage, anti-VEGF/Ang-2 antibody effectively rescued fVEP responses, preserving ON function, promoted RGC survival by rescuing them from ON ischemic injury, and maintained BOB integrity, in the rAION model, highlighting its potential benefit in NAION.

Abstract No.: 200210
Progression Patterns and Risk Factors of Axial Elongation in Young Adults With Nonpathologic High Myopia: Three-Year Large Longitudinal Cohort Follow-up

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Purpose: To investigate the progression patterns and risk factors of axial elongation in young adults with nonpathologic high myopia.

Methods: Prospective, clinical observational cohort study with 2 to 4 years of follow-up. A total of 1043 eyes of 563 participants (3515 medical records) aged 18 to 50 years with nonpathologic high myopia were included from 1546 participants (6318 medical records). Annual axial elongation was calculated via linear mixed-effect models, with generalized estimating equations (GEE) for eliminating an interocular correlation bias.

Results: Based on 5359 times of axial length (AL) measurements, the annual axial elongation of participants (mean [standard deviation, SD] age 31.39 [9.22] years) was 0.03 mm/year (95% confidence interval [CI]: 0.03-0.04; $P < 0.001$) during a 30.23 (6.06) months' follow-up. Severe (>0.1 mm/year), moderate (0.05-0.09 mm/year), mild (0-0.049 mm/year), and nil (≤ 0 mm/year) elongation was observed in 122 (11.7%), 211 (20.2%), 417 (40.0%), and 293 (28.1%) eyes. The following risk factors were significantly associated with axial elongation: baseline AL ≥ 28 mm; age <40 years; axial asymmetry, and women. Using antiglaucoma medications was a protective factor (odds ratio [OR], 0.46; 95% CI: 0.27-0.79; $P = 0.005$), which slowed 75% of axial elongation from 0.04 (0.06) to 0.01 (0.06) mm/y ($P < 0.001$).

Conclusions: Axial elongation continued in young adults with nonpathologic myopia. Risk factors included longer baseline AL and axial asymmetry, younger age, and women. Topical use of antiglaucoma medications may be useful to reduce axial elongation.

Abstract No.: 201106
Progression of Geographic Atrophy (GA) With Small Lesion Size in Age-Related Macular Degeneration (AMD)

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Purpose: To characterize the progression of early-stage GA with small lesion sizes in patients with AMD.

Methods: A retrospective analysis was conducted on a cohort of Korean patients diagnosed with GA, characterized by small lesions, each with at least three years of follow-up using fundus autofluorescence. The Initial GA area was defined as less than 0.7 mm^2 at baseline. The study examined lesion size progression, best-corrected visual acuity changes, and the impact of baseline variables such as subretinal drusenoid deposits (SDDs) and the GA distance from the fovea over a five-year period. Multiple regression analysis was performed to identify key predictors of GA progression.

Results: The study cohort was predominantly female (85%), with a mean age of 75.4 years, and 81% had SDDs. Initial GA lesions were most commonly found in the superior sector (54%), with over 75% near the Early Treatment Diabetic Retinopathy Study (ETDRS) inner ring. The mean GA growth rate was 1.16 ± 0.80 mm^2/year (0.38 ± 0.17 mm/year). The lesion-to-fovea distance decreased notably from 1382 µm to 441 µm, leading to a decline in visual acuity from 0.18 to 0.65 logMAR. Key predictors of faster GA progression included the presence of SDDs, larger baseline lesion size, and female sex.

Conclusions: Despite their small initial size, GA lesions can enlarge rapidly, particularly with square root transformation, and lead to substantial visual decline. Early detection and continuous monitoring are therefore essential in managing AMD progression.

Abstract No.: 200452
Real-World Outcomes of Faricimab in Patients With Neovascular Age-Related Macular Degeneration (nAMD) and Diabetic Macular Edema (DME) From a Global, Prospective Observational Study: The VOYAGER Study

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Purpose: VOYAGER is a global, real-world, prospective, five-year observational study (NCT05476926) in >5,000 patients initiating faricimab for nAMD, DME, or retinal vein occlusion. Six-month nAMD and DME data are reported here; one-year data will be updated for presentation.

Methods: Participants received treatment per real-world physician discretion between 2022 and 2024. Data on visual acuity (VA; Early Treatment Diabetic Retinopathy Study [ETDRS] letters), central subfield thickness (CST), subretinal fluid (SRF), intraretinal fluid (IRF), and safety were analyzed at baseline, month 6, and year 1 in treatment-naïve and previously treated (PT) eyes.

Results: At month 6, nAMD cohort included 443 (482 eyes) treatment-naïve and 300 (339 eyes) PT patients. The mean (SD [standard deviation]) VA changes from baseline were +3.6 (14.0) and -0.1 (10.7) ETDRS letters in treatment-naïve and PT eyes, respectively. Corresponding mean (SD) CST changes were -93.3 (123.0) and -26.9 (84.5) µm. For DME, 6-month cohort included 144 (187 eyes) treatment-naïve and 101 (129 eyes) PT patients. The mean (SD) VA changes were +6.7 (14.3) and +0.5 (11.8) ETDRS letters in treatment-naïve and PT eyes, respectively. Corresponding mean (SD) CST changes were -126.7 (132.8) and -56.2 (132.4) µm. Regarding fluid, SRF and IRF rates were lower at month 6 versus baseline in treatment-naïve and PT nAMD (SRF: 30.2% vs. 75.8%, 38.4% vs. 60.9%; IRF: 22.5% vs. 52.3%, 29.4% vs. 40.8%) and DME (SRF: 3.1% vs. 28.6%, 17.4% vs. 22.4%; IRF: 71.0% vs. 89.9%, 70.6% vs. 70.5%) eyes. The mean (SD) injection numbers for treatment-naive and PT eyes were 4.2 (1.4), 4.2 (1.5) for nAMD and 4.0 (1.6), 4.0 (1.7) for DME. Safety was consistent with faricimab phase 3 trials.

Conclusions: At month 6, VOYAGER study showed clinical benefits of faricimab in real-world nAMD and DME patients, supporting its real-world effectiveness and safety.

Abstract No.: 200623
Real-World Visual Outcomes After Switching to Faricimab in Patients With Chronic Diabetic Macular Edema (DME) at a Tertiary Eye Center In Singapore

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Purpose: To evaluate the visual and anatomical outcomes of switching to faricimab in Singaporean patients with DME previously treated with other anti-VEGF agents.

Methods: This was a single-center, retrospective study. Patients with DME who were switched from another anti–vascular endothelial growth factor (anti-VEGF) agent to faricimab and subsequently received three or four consecutive intravitreal faricimab injections were included. The primary outcomes were changes in best-available visual acuity (BAVA) and central subfield thickness (CST) on optical coherence tomography before and after the switch.

Results: A total of 158 eyes from 131 patients were included, comprising 102 eyes in the three-injection group and 56 eyes in the four-injection group. The mean duration of prior anti-VEGF therapy was 2.7 years. The mean BAVA at the time of switching to faricimab was 57.7 ± 16.4 letters (logMAR), which significantly improved to 62.2 ± 15.0 letters after faricimab treatment (mean follow-up: 6.9 weeks, $P < 0.001$). The mean CST also improved significantly from 431.6 ± 129.1 µm to 333.5 ±

90.1 µm (P < 0.001). No significant differences were observed between the three- and four-injection groups in terms of change in BAVA (P = 0.39) or CST (P = 0.58).

Conclusions: Switching to faricimab resulted in significant short-term improvements in both visual acuity and retinal thickness even among patients with chronic DME who were previously receiving long term treatment with other anti-VEGF agents.

Abstract No.: 200988
Results from the SPECTRA Clinical Trial Evaluating the Intravitreal Genetic Medicine 4D-150 in Adults With Diabetic Macular Edema (DME)

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Purpose: The SPECTRA clinical trial was designed to evaluate tolerability and dose response after a single 4D-150 injection. 4D-150 is an investigational intravitreal genetic medicine encoding aflibercept (AFLB) and an inhibitory miRNA sequence targeting vascular endothelial growth factor C (VEGFC). Reported here are data through week 60 (including 52-week primary endpoint) from the multicenter, open-label SPECTRA trial (NCT05930561).

Methods: SPECTRA evaluated 3E10 vg/eye, n = 9 dose level (planned Phase 3 dose) and lower dose levels 1E10 vg/eye, n = 12, and 5E9 vg/eye, n = 1. Participants included diabetic adults diagnosed with DME, best-corrected visual acuity (BCVA) of 25–83 ETDRS letters, and central subfield thickness (CST) ≥325 µm. Participants received two loading doses of AFLB 2 mg (8 and 4 weeks before 4D-150 injection) and one AFLB injection two weeks after 4D-150. All patients received a 16-week course of tapered difluprednate.

Results: 4D-150 was well tolerated; no treatment-related serious adverse events, intraocular inflammation, or hypotony were reported. At 60 weeks post-4D-150 injection, the mean ± standard deviation (SD) change from baseline in BCVA at the 3E10 vg/eye and lower doses was +9.7 ± 7.0 letters and +8.3 ± 5.6 letters, respectively. The mean change from baseline in CST was –173.9 ± 93 µm (3E10 vg/eye) and –139.2 ± 145 µm (lower doses). The mean number of supplemental AFLB injections was 1.56 and 3.73 in the 3E10 vg/eye and lower dose groups, respectively, confirming a dose-effect.

Conclusions: A single 4D-150 injection demonstrated a favorable safety profile, sustained anatomic control and visual improvements, and reduced treatment burden through 60 weeks.

Abstract No.: 200594
SPECTRUM: Early Data From a Global Real-World Study of Aflibercept 8 mg in Neovascular Age-Related Macular Degeneration (nAMD)

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Purpose: To present early results from the global Phase 4 SPECTRUM study of aflibercept 8 mg in patients with nAMD.

Methods: SPECTRUM (NCT06075147) is an ongoing, 24-month, prospective observational study. In the treatment-naïve (TN) and previously treated (PT) nAMD cohorts, patients aged ≥50 years who have been prescribed aflibercept 8 mg by their physician are eligible for enrollment. Data are collected during routine visits. All analyses are exploratory.

Results: In the TN nAMD week 8 analysis (first ~100 patients with a visit and visual acuity [VA] assessment at week 8), the mean change (observed cases) from baseline (BL) to week 8 in VA was +3.2 letters (n = 114; BL, 60.1 letters), and the mean central retinal thickness (CRT) change was −115 µm (n = 72; BL, 367 µm). Month 6 results will also be presented for the TN nAMD cohort. In the PT nAMD month 6 analysis (first 150 patients to complete month

6), the mean change (last observation carried forward) from BL to month 6 in VA was −0.7 letters (n = 148; BL, 63.0 letters), and the mean CRT change was −31 µm (n = 115; BL, 320 µm).

Conclusions: These interim SPECTRUM analyses provide early insights into real-world outcomes in patients with nAMD.

Abstract No.: 200904
Safety, Tolerability, and Properties of Novel C3 Inhibitor BI-C in Patients With Geographic Atrophy (GA)

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Purpose: GA is a degenerative disease of the macula leading to vision loss. BI-C, a high-affinity and high-potency C3 inhibitor, targets complement activation that drives progression of GA. This first-in-human trial of BI-C assesses safety, tolerability and pharmacokinetic (PK) and pharmacodynamic (PD) properties in patients with GA.

Methods: The single-rising dose (SRD) part characterized the dose-tolerability relationship for three increasing doses of intravitreal BI-C. The multiple-dose (MD) part investigated the safety and tolerability from the SRD part. Primary endpoints were the number of dose-limiting events (DLEs) (SRD part) and the number of drug-related (dr) adverse events (AEs) (MD part). PK and PD profiles of BI-C in aqueous humor (AH) were evaluated.

Results: Overall, 20 patients received BI-C. No DLEs or dr AEs were observed. There were no deaths or discontinuations due to AEs. Ocular treatment–emergent AEs were observed in three patients (23%) in the SRD part and two patients (29%) in the MD part; none were serious or dr. Serious or severe AEs were not experienced in the SRD part; in MD, they were experienced by three (43%) and by one (14%) patients, respectively. Free C3 concentrations in AH for most patients were below the limit of quantification after BI-C administration.

Conclusions: BI-C was well tolerated. The maximum suppression of free C3 in AH was reached in most patients at the first sampling time point after first BI-C administration, and it remained suppressed until the last sampling time point.

Abstract No.: 200604
Structure-Function Link of Ellipsoid Zone (EZ) Integrity and Low-Luminance Deficit (LLD) in Avacincaptad Pegol (ACP)–Treated Eyes With Geographic Atrophy (GA)

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Purpose: A better understanding of the structure–function relationship in GA is needed. LLD, a measure of visual function, and EZ integrity, a measure of photoreceptor health, are markers of disease severity. The purpose of this study was to assess the relationship between structure and function by analyzing EZ integrity and LLD in eyes with GA treated with ACP 2 mg.

Methods: This is a post-hoc analysis of pooled 18-month data from the GATHER1 and GATHER2 trials. Study eyes with non-center-point-involving GA were grouped by baseline LLD quartiles. LLD was calculated as the difference between normal-luminance best-corrected visual acuity (BCVA) and low-luminance BCVA. EZ degeneration and loss were measured as the percentage of the macular area with EZ to retinal pigment epithelium (RPE) thickness of ≤20 µm (partial EZ attenuation) and 0 µm (total EZ attenuation), respectively, using spectral-domain optical coherence tomography.

Results: At baseline, eyes with the greatest LLD had the highest partial and total EZ attenuation. At month 18, ACP 2 mg reduced the progression of partial and total EZ attenuation versus sham, with the most pronounced benefit

in eyes with greater baseline LLD (partial: 4.9% vs. 11.0%; total: 9.1% vs. 12.9%, respectively).

Conclusions: These results support a structure-function relationship in GA. ACP treatment was associated with reduced progression of EZ attenuation versus sham, particularly in eyes with greater baseline LLD, suggesting an increased treatment benefit in those eyes.

Abstract No.: 200402
The Asia-Pacific (APAC) Vision Health Survey Report: An Urgent Challenge and a Critical Conjunction

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Purpose: APAC Vision Health Survey (August 27 – September 2, 2024) aimed to address the region's disproportionate burden of vision impairment by exploring unmet needs, perceptions of vision health, links to aging and diabetes, and retinal disease awareness.

Methods: A total of 4354 individuals aged 40+ across Australia, Hong Kong, Malaysia, Philippines, Singapore, South Korea, Taiwan, and Thailand participated. Data self-reported via online, multilingual questionnaire — weighted by age, gender, education for population representation. Margins of error (4-5%) suggest reliable estimates. It is the APAC's first region- and population-wide dataset on eye health behaviors and awareness.

Results: Concern-action gaps: 91% worry about vision health, yet only 28% get yearly exams; 32% delay care until symptoms appear. Among respondents with diabetes, 32% skip yearly exams, 11% have never had one. 42% of those aged 60+ forego regular eye checks. Low retinal disease awareness (1–4 scale): diabetic macular edema (1.9), age-related macular degeneration (AMD) (2.1), wet-AMD (1.7), and retinal vein occlusion (1.6). Multidimensional care barriers, highlighted by respondents with diabetes: cost (37%), inconvenience/lack of time (24%), low awareness (20%), fear/anxiety (20%), no perceived need (17%), and access difficulties (16%). Anticipated vision impairment impact: daily life (68%), quality of life (49%), employment (46%), finances (41%), mental health (38%). 95% of caregivers expressed financial, physical, and emotional burdens.

Conclusions: Survey data highlights vision impairment as a pressing health and socioeconomic challenge requiring both policy and clinical responses — from early detection and accessible care for high-risk groups to public awareness, digital innovation, workforce investment, and multisector partnerships that scale prevention and impact.

Abstract No.: 201055
The Role of Piezo2 in the Progressive Degeneration of Retinal Ganglion Cells (RGCs) in Glaucoma

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Purpose: To investigate Piezo2's role in RGCs and axon injury in glaucoma via a silicone oil–induced ocular hypertension (SOHU) mouse model, focusing on its modulation of RGC survival and axonal integrity under elevated intraocular pressure (IOP).

Methods: SOHU mice simulated glaucoma. Adeno-associated virus-mediated Piezo2 knockdown or overexpression. Groups were divided for the respective experiments. IOP was monitored weekly. Evaluations included fundus photography, optical coherence tomography angiography, flash visual evoked potential (fVEP), histological analyses, and Western blot for CaMKII-CREB pathway proteins.

Results: Based on the cluster marker bubble plot and reverse trajectory analysis of single-cell transcriptome sequencing, it is currently considered that the new Piezo2+ population originates from the anterior chamber (AC) and may be a new subpopulation of AC. The enrichment of specific gene pathways in the Peizo2+ population indicates that it is related to synaptic transmission and function. Knockdown of Piezo2 in SOHU mice aggravated glaucomatous pathology, including reduced ganglion cell complex (GCC)

thickness, lower RGC survival rate, decreased axon count, and impaired fVEP amplitudes. Western blot showed suppressed expression of p-CaMKII and CREB, indicating inhibited CaMKII-CREB signaling. Overexpression of Piezo2 in SOHU mice partially restored GCC thickness, improved RGC survival and axon count, and increased fVEP amplitudes. This was accompanied by reactivated CaMKII-CREB signaling (upregulated p-CaMKII and CREB).

Conclusions: Piezo2 modulates the survival of RGCs and their axons under mechanical stress through the CaMKII-CREB pathway. Its knockdown exacerbates glaucomatous injury, while overexpression exerts neuroprotective effects. These findings suggest Piezo2 as a potential therapeutic target for glaucoma.

Abstract No.: 200516
Treatment Patterns and Safety of Avacincaptad Pegol (ACP) in Real-World Patients with Geographic Atrophy (GA)

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Purpose: ACP 2 mg was approved by the US Food and Drug Administration in August 2023 for the treatment of GA. The real-world use and safety data of ACP are limited. This study examined the real-world treatment patterns in patients with GA who received ACP in the US.

Methods: Patients diagnosed with GA (aged ≥50 years at diagnosis) from September 1, 2020, who received their first ACP treatment between September 1, 2023, and August 31, 2024 (n = 10,181 patients, 13,391 eyes), from the American Academy of Ophthalmology IRIS® (Intelligent Research In Sight) Registry were included in this study.

Results: The average follow-up duration was 25 weeks. Further, 78% of patients were censored due to the end of study, so longer-term treatment patterns and adverse events (AEs) could not be discerned. While most (87.1%) patients had bilateral GA, many patients (68.5%) received ACP in one eye. The average ACP injection interval was 7.0 weeks. Discontinuation (8.7%) and other GA treatment initiation (3.3%) rates were low. The key AEs incidence rate was 103 events/10,000 injections. Most patients did not have ocular comorbidities; the most common comorbidities were neovascular age-related macular degeneration, choroidal neovascularization, and cataract. The majority of patients (79.1%) had no concomitant anti–vascular endothelial growth factor (anti-VEGF) use; only 3% of patients with no anti-VEGF use prior to first ACP injection received anti-VEGF concomitantly. The average ACP injection interval was similar between patients with (7.2 weeks) and without (6.9 weeks) concomitant anti-VEGF use.

Conclusions: This study provides a view of ACP treatment patterns in patients with GA and supports the safety and tolerability of ACP.

Abstract No.: 200513
Update on Faricimab for Diabetic Macular Edema (DME): New Clinical Features of Eyes in the RHONE-X Long-Term Extension Study

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Purpose: Faricimab has demonstrated vision gains, anatomic improvements, and extended durability in DME, with comparable safety profile to aflibercept. We present updated findings from the phase 3 RHONE-X trial (NCT04432831) evaluating faricimab's long-term safety (primary objective) and efficacy (exploratory) in DME patients who completed the two-year, phase 3 YOSEMITE/RHINE trials.

Methods: Patients receiving faricimab 6.0 mg every eight weeks (Q8W), personalized treat-and-extend (T&E) dosing, or aflibercept 2.0 mg Q8W in parent trials received faricimab 6.0 mg up to Q16W T&E (prespecified vision and anatomic criteria) for an additional two years in RHONE-X. The first 16 weeks had masked monthly visits, followed by T&E interval-based study visits.

Results: Of the 1474 patients, 81.7% completed RHONE-X. Robust vision gains, improved central subfield thickness from parent trials were maintained. After four years of faricimab treatment, >90% patients achieved DME absence, regardless of original treatment. The first DME absence (90th percentile) was reached 12–15 months earlier, with fewer injections with faricimab vsersus aflibercept in parent trials. At parent trial end, fewer faricimab Q8W (-10.3%; nominal P = 0.0026) and T&E (-7.8%; nominal P = 0.0251) patients had hard exudates versus aflibercept. By the end of RHONE-X, the differences in hard exudates were similar (nominal P > 0.55). After four years, 80% patients had extended ≥Q12W and >50% qualified for Q20W dosing. Volumetric analysis will be presented.

Conclusions: RHONE-X, the largest DME extension study, maintained faricimab's efficacy and durability from parent trials. Aflibercept-treated patients during parent trials demonstrated further reduction in hard exudates after faricimab T&E in RHONE-X, suggesting improved vascular stability and disease control with faricimab.

Abstract No.: 201234
Visual and Anatomical Recovery After Intravitreal Dexamethasone Implant in Vitrectomized Eyes With Refractory Macular Edema: A Five-Patient Case Series

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Purpose: To evaluate the visual and anatomical outcomes of intravitreal dexamethasone (Ozurdex) in vitrectomized eyes with refractory macular edema secondary to diabetic retinopathy or retinal vein occlusion.

Methods: This retrospective case series included five vitrectomized eyes of five patients with persistent center-involving macular edema despite ≥3 prior anti–vascular endothelial growth factor (anti-VEGF) injections. All eyes received a single Ozurdex implant and were followed for 3–6 months. Outcome measures included best-corrected visual acuity (BCVA), central macular thickness (CMT), duration of effect, and adverse events such as intraocular pressure (IOP) rise or cataract progression.

Results: The mean age was 59.2 ± 6.8 years. Baseline mean BCVA was 20/100, improving to 20/50 at six weeks (P < 0.01). The mean CMT reduced from 490 ± 52 µm to 305 ± 34 µm. The therapeutic effect lasted 12–14 weeks in most eyes; two patients required repeat injection at four months. One patient developed transient IOP elevation (24 mmHg), controlled with topical medication. No implant migration or endophthalmitis occurred.

Conclusions: Ozurdex is a safe and effective option for macular edema in vitrectomized eyes, providing meaningful visual and anatomical recovery where anti-VEGF therapy alone may be inadequate. Its sustained action in a previously vitrectomized cavity underscores its value, particularly in patients needing long-term control with fewer injection visits. This case series supports considering Ozurdex earlier in the treatment algorithm for select patients, especially when compliance, recurrence, or vitrectomy-induced pharmacokinetic changes limit anti-VEGF efficacy. This small series highlights its role in a challenging clinical scenario.

Retina (Surgical)

Abstract No.: 201022
125 Cases of Ocular Injury by Shotgun Pellet Managed at a Tertiary Eye Care Center

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Purpose: To describe and evaluate the outcomes of ocular injuries caused by shotgun pellet.

Methods: A prospective cross-sectional study, from July 2024 to February 2025, including 125 eyes of 122 individuals. They were followed up for six months. Necessary procedures were undertaken as indicated. A complete ophthalmological examination was done.

Results: The mean age was 22.5 ± 7.9 years (14–52 years). The majority (38, 30.4%) of the individuals were in the age group of 19-23 years. The most common clinical features at presentation were vitreous hemorrhage in 117 (93.6%), followed by hyphema in 83 (66.4%). The majority (62, 49.6%) of the eyes had vitreous prolapse with or without uveal tissue in the wound. Seventy-eight eyes (62.4%) presented with hand motion/perception of light (PL) vision. Two (1.6%) presented with non-PL. A hundred and two (81.6%) presented with a visual acuity of worse than 6/60. Following six months, 83 (66.4%) had a visual acuity of <6/60. 42(33.6%) had better than 6/60, and 10 (8%) had better than 6/18. Eighty-two eyes (65.6%) were silicone oil–filled. Corneal opacity developed in 53 (42.4%), macular scar in 74 (59.2%), proliferative vitreoretinopathy in 45 (26.2%), and glaucoma in 32 (25.6%) eyes. Fifty-two (41.6%) remained aphakic. Entry wound was located between the limbus and 5 mm into the sclera in 52 (41.6%) eyes. The majority of the exit wound is located within the vascular arcade in the macular region (53.6%).

Conclusions: Injuries with an intraocular foreign body result in poor anatomical and functional outcomes. Early vitreoretinal intervention can result in anatomical success. The decision and timing of multiple procedures affect the outcome.

Abstract No.: 201204
Comparison of Intraocular Lens (IOL) Tilt and Decentration Between Three Different Techniques of Scleral Fixated IOLs (SFIOLs) Using Anterion Imaging

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Purpose: To compare IOL decentration and tilt between sutured, sutureless tucked (CMT-Flex) SFIOLs, and modified Canabrava SFIOLs.

Methods: The study was conducted on eyes with aphakia needing SFIOLs. Patients were divided into three groups, with 30 eyes in each group. Group 1 underwent CMT-Flex IOL, which is a sutureless foldable IOL with T-shaped haptics that can be injected through a clear corneal incision and the T-haptics are brought out under scleral flaps. Group 2 underwent conventional two-point fixated sutured SFIOL. Group 3 underwent the modified Canabrava technique, where a 6-0 prolene is passed through the eyelet of SFIOL and low-temperature cautery is used to form bulbs on either side. Postoperative measurements were determined using the Anterion (Heidelberg engineering, Heidelberg), and IOL tilt and decentration were calculated using the ImageJ software.

Results: At six-month follow-up, the mean best-corrected visual acuity (BCVA) in Group 1 was logMAR 0.48 ± 0.41, in Group 2 was log MAR 0.46 ± 0.33, and in Group 3 was logMAR 0.46 ± 0.40. There was no statistically significant difference in postoperative BCVA. Six months mean horizontal IOL decentration and tilt were statistically significantly better in Group 1 as compared to Groups 2 and 3 ($P < 0.05$). The mean vertical IOL decentration and tilt was statistically significantly better in Group 1 as compared to Groups 2 and 3 ($P < 0.05$).

Conclusions: CMT-Flex, sutured SFIOL, and modified Canabrava SFIOL are comparable in terms of BCVA. However, IOL decentration and tilt are significantly lower in CMT-Flex group compared to the sutured SFIOL group and Canabrava SFIOLs, thus potentially reducing glares, haloes, and higher order aberrations.

Abstract No.: 200917
Efficacy Observation of Intraoperative Optical Coherence Tomography (OCT)–Guided 41-Gauge Retinal Microneedle Drainage for Drusenoid Retinal Pigment Epithelial Detachment (PED)

*First Author: Shuai **SHENG***

Purpose: To assess intraoperative OCT-guided 41-gauge (G) retinal microneedle drainage for drusenoid PED.

Methods: Nonvascular PED can be classified into drusenoid PED and exudative PED based on pathogenesis. Currently, there is no widely accepted effective treatment for drusenoid

PED. Thirty eyes with confirmed drusenoid PED (excluding other types via OCT angiography/angiography) were randomized: Group A (15 eyes) underwent vitrectomy with intraoperative OCT-guided subretinal fluid aspiration using a 41G needle at the PED edge. Group B (15 eyes) received intravitreal anti–vascular endothelial growth factor injections only. Preoperative assessments included best-corrected visual acuity (BCVA) (Snellen), central retinal thickness (CRT), foveal PED height/width (OCT), and PED area (scanning laser ophthalmoscopy). Outcomes (complete/partial/no resolution based on foveal PED height change) were compared at six months, along with BCVA, CRT, and PED dimensions.

Results: Groups had similar baseline characteristics. At six months, Group A showed significantly higher complete PED resolution (9 eyes vs. 2 eyes in B) and lower no resolution (1 eye vs. 6 eyes). Differences were statistically significant.

Conclusions: Intraoperative OCT-guided 41G microneedle drainage effectively resolves drusenoid PED, improving BCVA and reducing CRT/PED parameters, potentially mitigating long-term vision loss. Real-time OCT guidance enhances safety, offering a promising new treatment.

Abstract No.: 201218
Evaluation of Supine Versus Prone Positioning in Fresh Rhegmatogenous Retinal Detachment (RRD) Treated With Pars Plana Vitrectomy (PPV) With Gas Tamponade

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Purpose: To compare supine positioning to prone positioning in fresh RRDs treated with vitrectomy with gas tamponade.

Methods: This study was a randomized controlled trial conducted in a tertiary care centre in India. Seventy-two patients with RRD of <1 month duration and proliferative vitreoretinopathy (PVR) grade

Results: Baseline characteristics including extent of detachment, break location, and PVR grade were comparable. Anatomical success after single surgery was 97.3% in Group A and 94.3% in Group B (P = 0.609). Redetachment occurred in one patient (2.7%) in Group A and two (5.7%) in Group B. At three months, BCVA improved significantly in both groups (P < 0.001), with final BCVA of 0.44 ± 0.27 in Group A and 0.35 ± 0.27 in Group B (P = 0.119). Cataract formation was noted in 60% (Group A) and 53.8% (Group B) (P = 1.00). Complications such as spikes in IOP, epiretinal membrane formation, cystoid macular oedema, etc., were similar in both groups.

Conclusions: Rates of retinal reattachment were comparable in both groups, showing that supine position is equally safe and effective as a postoperative positioning for adequate tamponade.

Abstract No.: 200693
Foldable Capsule Body (FCB) Scleral Buckling Technique Under Indirect Ophthalmoscopy: A Novel Technique for Precise Break Localization in Rhegmatogenous Retinal Detachment (RRD)

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Purpose: Describing an innovative FCB scleral buckling technique under indirect ophthalmoscopy for treating RRD, which enables precise intraoperative localization of retinal break, significantly improving the primary success rate of the surgery.

Methods: FCB scleral buckling technique under indirect ophthalmoscopy was conducted on 16 cases (16 eyes) diagnosed with RRD. During surgery, the operator places the folded balloon into the preset scleral tunnel and adjusts the balloon position and inflation under the indirect ophthalmoscope, ensuring the hole is positioned on the balloon buckle and enabling precise laser coagulation around the break postoperatively. After two weeks, the FCB is removed under subconjunctival infiltration anesthesia. Ocular complications and systemic conditions were closely monitored throughout the follow-up period.

Results: Postoperatively, retinal reattachment was observed in all 16 eyes. During follow-up, the visual acuity improved, and the refractive state and visual function had no change. None of the patients had serious ocular or systemic complications during or after surgery.

Conclusions: This novel technique provides the capability for precise intraoperative localization, significantly improves the primary success rate of retinal reattachment. More importantly, this technique preserves the refractive state of patients, enhancing the recovery of visual acuity and visual function. Furthermore, FCB scleral buckling technique inherently exhibits features such as minimal invasiveness, straightforward procedural execution, absence of muscle traction, no requirement for scleral drainage, and elimination of retrobulbar freezing. The novel therapy provides a more precise and practical technique to improve the cure rate of RRD.

Abstract No.: 200992
Functional and Anatomical Outcomes in Eyes With Idiopathic Epiretinal Membranes (ERM) Following Surgical Removal. Results at Five Years of the Pan-American Collaborative Retina Study (PACORES) Group

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Purpose: To report the long-term outcomes and validate the staging classification of ectopic inner foveal layer (EIFL) as a prognostic factor for visual outcomes in patients undergoing ERM removal.

Methods: A multicenter, retrospective, observational study of 65 patients with an idiopathic ERM who underwent surgical removal with a follow-up of at least 60 months.

Results: Preoperative staging included six eyes (9.2%) as stage 1, 10 eyes (15.3%) as stage 2, 33 eyes (50.7%) as stage 3, and 16 eyes (24.6%) as stage 4 ERM. At five years, the mean logMAR best-corrected visual acuity (BCVA) improved from 0.6131 (Snellen 20/82) at baseline to 0.2723 logMAR (Snellen 20/37) ($P < 0.0001$). The central macular thickness (CMT) improved from 489 µm at baseline to 347 µm ($P = 0.0001$). Final BCVA ≥ 20/40 was attained by 84.6%, 86.2%, and 47.1% of the eyes with stages 2, 3 and 4, respectively. Preoperative ERM staging was associated with both preoperative BCVA ($P = 0.04$) and five-year postoperative BCVA ($P < 0.000001$). Preoperative cystoid macular edema (CME) was associated with five-year postoperative BCVA ($P = 0.0274$). The preoperative and postoperative EIFL thickness did not correlate with five-year postoperative BCVA.

Conclusions: Surgical removal of an idiopathic ERM results in long-standing BCVA improvement regardless of ERM stage. Preoperative EIFL ERM staging assesses preoperative and postoperative BCVA. The preoperative presence of CME was also associated with a poorer postoperative BCVA.

Abstract No.: 201261
Intra-Silicone Oil Methotrexate (MTX) for Massive Preretinal Hemorrhage (PRH) in Complex Diabetic Vitrectomy

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Purpose: To evaluate intra-silicone oil MTX in the resolution of preretinal bleed in diabetic tractional retinal detachment (TRD).

Methods: A prospective, interventional, case-control study. Twenty-nine patients with TRD underwent vitrectomy with intraoperative massive PRH. Group A (15 patients) underwent vitrectomy with silicone oil and MTX 0.4 mg/0.1 ml intraoperatively and during the postoperative period. Group B (14 patients) did not receive MTX.

Results: The number of injections in Group A were 2.8 ± 0.86. Preoperative best-corrected visual acuity (BCVA) in Group A was 1.56 ± 0.43 (logMAR) and Group B was 1.62 ± 0.71. At two months, Group A and Group B had BCVA 1.18 ± 0.5 and 1.31 ± 0.78 ($P = 0.02$).

Three patients in Group B had sub-oil recurrent vitreous hemorrhage, and three had recurrent detachment. The average size of PRH in Group A and Group B was 49.68 ± 16.75 mm^2 and 47.09 ± 15.26 mm^2, and by the second month, PRH reduced to 5.5 ± 6.41 mm^2 and 11.38 ± 8.65 mm^2 (P = 0.022).

Conclusions: MTX resulted in earlier resolution of PRH, improving visual outcomes in diabetic TRD. MTX, though well known as an anti-inflammatory agent, has antiplatelet actions, potentially by promoting platelet apoptosis and oxidative stress and by inhibiting enzymes in platelet function. This translates into statistically significant visual improvement and negates the scaffold for proliferative vitreoretinopathy by reducing the incidence of recurrent bleed or retinal detachment.

Abstract No.: 201075
Macular Buckling Combined With Pars Plana Vitrectomy (PPV) and Air Tamponade for Retinal Detachment Secondary to Myopic Macular Hole

*First Author: Shida **CHEN***

Purpose: To evaluate the efficacy of macular buckling combined with PPV and air tamponade for treating retinal detachment secondary to myopic macular hole, without requiring postoperative facedown positioning.

Methods: Twenty eyes of 20 highly myopic patients with retinal detachment secondary to myopic macular hole were prospectively enrolled. All patients underwent macular buckling combined with PPV and air tamponade. No facedown positioning was required postoperatively. Best-corrected visual acuity (BCVA), axial length (AL), macular hole (MH) closure rate, and retinal reattachment rate were assessed.

Results: At one month postoperatively, retinal reattachment was achieved in 100% of eyes (20/20), and MH closure was achieved in 95% of eyes (19/20). The mean BCVA improved significantly from 1.53 ± 0.34 logMAR preoperatively to 0.85 ± 0.16 logMAR postoperatively. The mean AL decreased by 2.3 ± 0.3 mm.

Conclusions: Combined macular buckling, PPV, and air tamponade is an effective treatment for retinal detachment secondary to myopic macular hole, achieving high anatomical success rates without the need for postoperative facedown positioning.

Abstract No.: 200978
Macular Hole Closure by Internal Limiting Membrane (ILM) Flap Without Gas Tamponade Versus Conventional Surgery: A Comparative Study

*First Author: Simon **SZETO***

Purpose: To compare the effectiveness and safety of the novel ILM flap with no gas tamponade technique and conventional surgery in repairing macular hole (MH).

Methods: A retrospective comparative study involved consecutive patients with optical coherence tomography–confirmed full-thickness MH who underwent MH repair surgery by either conventional surgery or the ILM flap with no gas tamponade technique at the Hong Kong Eye Hospital from November 1, 2021, to July 31, 2024.

Results: Ninety-three eyes were included in the study, of which 51 eyes underwent MH repair with conventional surgery and 42 underwent the ILM flap with no gas tamponade technique. The MH closure rates were comparably high in both groups (94.1% vs. 95.2%, P = 0.812). Visual acuity was significantly better in the no gas tamponade group at postoperative week 1 (1.48 vs. 0.84, P < 0.001) and month 1 (0.87 vs. 0.73, P = 0.048). There were no significant differences in visual acuity by postoperative month 3 (0.54 vs. 0.56, P = 0.281) and 6 (0.41 vs. 0.47, P = 0.991). The rate of foveal gliosis was lower in the no gas tamponade group (20.0% vs. 4.9%, P = 0.043) in multivariate analysis.

Conclusions: The ILM flap with no gas tamponade technique could achieve a high MH closure rate comparable to conventional

surgery and was associated with significantly better vision in the first month of postoperative period.

Abstract No.: 200758
Peripapillary Retinoschisis (PPRS) – The Expanded Spectrum and New Insights From Multimodal Imaging

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Purpose: To establish a comprehensive classification system for PPRS and standardize its nomenclature through detailed characterization of its various associated conditions.

Methods: A retrospective, multicenter case series of PPRS was conducted from August 2021 to September 2024. The study protocol included standardized imaging with enhanced depth imaging or swept-source optical coherence tomography of the optic nerve and macula, colour fundus photography, and fundus autofluorescence. Selected cases underwent additional fundus fluorescein and indocyanine angiography when clinically indicated. The retinoschisis was characterized by the location and relation to the optic disc, and the layer(s) of the retina affected.

Results: A total of 47 eyes from 41 patients with PPRS were identified, comprising 22 (54%) females and a mean age of 56 years (range 14-92 years). These were classified into nine etiologies: Congenital Disc Abnormalities (CDA, n = 16 eyes), peripapillary chorioretinal coloboma (n = 1), peripapillary atrophy (n = 3), glaucoma (n = 7), peripapillary pachychoroid syndrome (PPS, n = 4), peripapillary choroidal neovascularization (PP-CNV, n = 3), myopia (n = 5), vitreopapillary traction (VPT, n = 4), and idiopathic (n = 4). A new entity, the focal optic disc dome (FODD) associated with PPRS, is described.

Conclusions: The identified nine etiologies of PPRS can be systematically categorized into five distinct groups. This classification framework enhances diagnostic accuracy and treatment planning, particularly for conditions with established therapeutic protocols (CDA, glaucoma, PPS, PP-CNV, and VPT). Key new findings include the identification of truly idiopathic PPRS and the characterization of FODD.

Abstract No.: 200317
Real-World Outcomes of Scleral-Fixated Intraocular Lens (SFIOL): A Multi-Surgeon Comparison of Four-Point Fixation and Flanged Intrascleral Fixation Techniques

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Purpose: To compare clinical outcomes between two SFIOL techniques: four-point fixation and flanged intrascleral fixation.

Methods: This retrospective study included eyes that underwent SFIOL using either four-point or flanged intrascleral fixation from 2018 to 2022. Visual outcomes and postoperative complications were compared. Subgroup analyses were performed for eyes with pars plana vitrectomy (PPV), flanged fixation with and without PPV, and high versus non-high myopia.

Results: A total of 304 eyes from 294 patients were included, with a mean follow-up of 702.6 ± 537.9 days. At three months, four-point fixation demonstrated better best-corrected visual acuity (BCVA) (0.24 ± 0.35 vs. 0.37 ± 0.60 logMAR, P = 0.036) and a higher proportion achieving 0.3 logMAR or better (80.4% vs. 71.0%, P = 0.150). In the PPV subgroup, four-point fixation showed superior BCVA (0.24 ± 0.35 vs. 0.38 ± 0.36 logMAR, P = 0.026) and lower IOL-related complication rates, compared to flanged intrascleral fixation (5.3% vs. 15.7%, P = 0.042). Among flanged intrascleral fixation eyes, those with PPV had higher rates of transient postoperative hypotony (12.1% vs. 1.5%, P = 0.010). Four-point fixation also demonstrated better BCVA in the non-high

myopia subgroup (0.24 ± 0.35 vs. 0.38 ± 0.58 logMAR, P = 0.041); however, no significant difference was observed in the high myopia subgroup.

Conclusions: Four-point fixation was associated with better early visual outcomes overall and fewer IOL-related complications in eyes with PPV, compared to flanged intrascleral fixation.

Abstract No.: 200250
Restoration of Central Vision With the PRIMA System in Patients With Geographic Atrophy (GA) in Dry Age-Related Macular Degeneration (AMD): The PRIMAVERA Trial

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Purpose: To report preliminary safety outcomes and prosthetic visual acuity (VA) in patients with GA due to AMD who were implanted with the PRIMA subretinal photovoltaic array.

Methods: This is a pivotal, open-label trial in 17 European sites (ClinicalTrials.gov NCT04676854). The PRIMA system is an electronic visual prosthesis consisting of an implantable photovoltaic microchip (2 x 2 mm in size, 30 µm thick), augmented-reality glasses with a camera, an image processing unit including Zoom, and projection module. Images captured by the camera are processed and projected onto the submacular PRIMA implant by near-infrared light (880 nm). Thirty-eight subjects (60 years or older) with late-stage fovea involving GA and VA logMAR 1.2 (20/320) or worse were implanted.

Results: In all subjects, the implant was successfully placed under the macula. Twenty-seven subjects were treated with air/gas tamponade, 11 with silicone oil. At 12 months, in more than 75% of tested subjects, VA improved by a minimum of logMAR 0.3 (corresponding to 3 Early Treatment Diabetic Retinopathy Study [ETDRS] lines). The mean improvement with the system versus baseline was logMAR 0.5 (5 ETDRS lines), and maximum VA gain was logMAR 1.2 (12 ETDRS lines). The average natural vision outside the GA lesion was not affected after implantation (mean logMAR change <0.02). All significant adverse events were perioperative and resolved, and none were purely device-related, with the most frequent were retinal breaks (7), temporary increased intraocular pressure (6), and macular hemorrhages (5).

Conclusions: For the first time, meaningful VA improvement was attained by restoring patients' central vision with PRIMA, perceived simultaneously with natural peripheral vision.

Abstract No.: 200959
Risk of Rhegmatogenous Retinal Detachment (RRD) Following Vaginal Delivery in Pregnant Women With Predisposing Factors: A Systematic Review of the Evidence

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Purpose: To systematically assess the impact of delivery method on the occurrence of RRD in women with predisposing risk factors.

Methods: This systematic review, prospectively registered on PROSPERO (CRD42024526080), comprehensively searched Scopus, PubMed, Cochrane Library, and Google Scholar for observational studies reporting RRD incidence in relation to delivery method. Independent dual screening and data extraction were performed. The primary outcome was post-delivery RRD incidence across three delivery methods: spontaneous vaginal delivery, assisted delivery, and cesarean section. Risk of bias was evaluated using the National Institute of Health (NIH) tool.

Results: Analysis of 14 studies encompassing 228 patients (264 deliveries: 142 vaginal and 122 cesarean) revealed comparable outcomes regardless of delivery method. The study population included women with various ophthalmological risk factors: history of RRD, Stickler syndrome, high myopia, and lattice degeneration. Most studies reported no visual complications or vitreoretinal abnormalities

following either delivery method. Notably, in studies examining recurrence risk, RRD rates were similar following vaginal delivery (5%) and cesarean section (7.5%), suggesting cesarean delivery offers no protective benefit.

Conclusions: This systematic review provides compelling evidence that delivery method does not influence RRD occurrence in high-risk women. Cesarean section demonstrates no protective advantage over vaginal delivery for preventing RRD in patients with predisposing ocular conditions. These findings support individualized obstetric decision-making based on standard indications rather than presumed ophthalmological risk.

Abstract No.: 200190
Risk of Rhegmatogenous Retinal Detachment (RRD) Following Vaginal Delivery in Pregnant Women With Predisposing Factors: A Systematic Review of the Evidence

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Purpose: To systematically assess the impact of delivery method on the occurrence of RRD in women with predisposing risk factors.

Methods: This systematic review, prospectively registered on PROSPERO (CRD42024526080), comprehensively searched Scopus, PubMed, Cochrane Library and Google Scholar for observational studies reporting RRD incidence in relation to delivery method. Independent dual screening and data extraction were performed. The primary outcome was post-delivery RRD incidence across three delivery methods: spontaneous vaginal delivery, assisted delivery, and cesarean section. Risk of bias was evaluated using the National Institute of Health (NIH) tool.

Results: Analysis of 14 studies encompassing 228 patients (264 deliveries: 142 vaginal and 122 cesarean) revealed comparable outcomes regardless of delivery method. The study population included women with various ophthalmological risk factors: history of RRD, Stickler syndrome, high myopia, and lattice degeneration. Most studies reported no visual complications or vitreoretinal abnormalities following either delivery method. Notably, in studies examining recurrence risk, RRD rates were similar following vaginal delivery (5%) and cesarean section (7.5%), suggesting cesarean delivery offers no protective benefit.

Conclusions: This systematic review provides compelling evidence that delivery method does not influence RRD occurrence in high-risk women. Cesarean section demonstrates no protective advantage over vaginal delivery for preventing RRD in patients with predisposing ocular conditions. These findings support individualized obstetric decision-making based on standard indications rather than presumed ophthalmological risk.

Abstract No.: 200107
THE GLOW STUDY — Real-World Utilization of Illuminated Vitrectomy Trocar Cannulas "The Glowport"

*First Author: Prithvi **CHANDRAKANTH***
*Co-Author(s): Shishir **VERGHESE***

Purpose: To evaluate the real-world experience and subjective feedback of vitreoretinal surgeons using the Glowport — an illuminated vitrectomy trocar cannula in routine surgical practice.

Methods: The Glowport is an innovative, frugal, 3D-printed, phosphorescent "glow-in-the-dark" ring designed to retrofit seamlessly onto standard 25-gauge vitrectomy trocar cannulas. Fabricated from a biocompatible blend of polylactic acid and strontium aluminate, the device combines structural integrity with sustained phosphorescence. This unique design enhances intraoperative visualization, facilitates smoother and faster instrument exchanges, reduces ocular touch errors, and shortens overall procedure time under mesopic conditions. Additionally, it minimizes the need for repeated switching of the microscope light.

We conducted a retrospective, multicenter, feedback-based study involving vitreoretinal surgeons who used the Glowport over a one-year period. A structured questionnaire assessed five key parameters: Visualization & Precision Safety, Ease of Use, Durability, and Cost-Effectiveness. Each category was rated on a 1-10 scale and weighted to calculate an aggregated quality score (AQS).

Results: Seven vitreoretinal surgeons utilized the Glowport in 200 patients over a period of one year. They reported improved visualization and precision, reduced ocular touch errors, and a notable reduction in mean task completion time. The Glowport minimized the need for repeated switching of microscope light and integrated seamlessly into the surgical workflow. Feedback highlighted its benefits for both experienced surgeons (particularly presbyopes) and trainees. The final AQS was 8/10.

Conclusions: In conclusion, the Glowport is a frugal, reusable, and effective tool that enhances visualization and surgical efficiency. Subjective surgeon feedback supports its utility in enhancing port visualization in vitreoretinal surgery.

Translational Medicine

Abstract No.: 200274
Bioengineered Intravitreal Stem Cell Factor Enables Long-Lasting Neurovascular Repair in Chronic Retinal Ischemia

*First Author: Xi **CHEN***

Purpose: Retinal ischemia underlies vision loss in diseases such as ocular ischemic syndrome, diabetic retinopathy, glaucoma, and vascular occlusions. Effective neurovascular-targeted therapies remain lacking. We investigated a bioengineered intravitreal formulation of stem cell factor (SCF) to protect retinal structure and function in a chronic ischemia model by modulating the neurovascular unit (NVU).

Methods: Recombinant SCF was incorporated into a thermosensitive hydrogel (SCF-HG), forming a sustained-release depot after intravitreal injection. SCF-HG retained over 90% bioactivity for four weeks in vitreous-mimetic conditions. Brown Norway rats underwent bilateral common carotid artery occlusion, followed by a single intravitreal injection of SCF-HG (200 ng SCF) or hydrogel control. Retinal function (ERG, light/dark box, optokinetic tracking), structure (ONL thickness, Brn3a⁺ RGCs, synaptic markers), and NVU integrity (CD31 angiography, GFAP/Iba1 staining) were evaluated over 28 days. Bulk RNA-seq and qRT-PCR were used to analyze Wnt pathway activation.

Results: SCF-HG sustained therapeutic SCF levels in vivo. Treated eyes preserved ONL thickness (+35%, $P < 0.001$) and Brn3a⁺ RGCs (+60%, $P < 0.001$), enhanced synaptic density (+45%, $P < 0.01$), and maintained interneuron populations. Functional improvements included 2.3-fold higher ERG amplitudes, a 50% reduction in light avoidance, and a 32% gain in spatial acuity. NVU integrity improved with 42% vascular recovery and a 52% reduction in glial activation. Transcriptomics revealed activation of the Wnt7a/b-Lrp5-Lgr5 axis.

Conclusions: The SCF-HG platform enables sustained intravitreal delivery and restores neurovascular function in chronic retinal ischemia. This bioengineered therapeutic holds translational potential for ischemic retinal disease treatment.

Abstract No.: 201083
Relationship of Immune Factor Levels Between Vitreous, Aqueous, Serum and Tears – The VAST Study

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Purpose: Blood and ocular fluids are being increasingly used as a sample source for molecular and biomarker profiling, and the status of these factors across matched samples can help better understand etiopathogenesis, especially for ocular complications of systemic illnesses.

Methods: Tears and blood were collected prior to diabetic vitrectomies from 22 patients. Aqueous humor and vitreous humor were collected intraoperatively. Flow cytometry-based multiplex ELISA and different quantifiers were used to measure 53 soluble factors, such as cytokines and chemokines. Finally, the absolute concentrations of each were quantified.

Results: Plasma had the highest protein concentration, and we used the normalization method to make all samples comparable. The highest correlation (79%) was between vitreous and aqueous, while there was a 28% correlation between all four samples.

Conclusions: The association of molecular biomarkers among different ocular sample types opens up the perspective of using surrogate sampling and noninvasive or minimally invasive sample sources for molecular studies.

Abstract No.: 200369
Revitalizing Diseased Retinal Pigment Epithelium (RPE) by Mitochondrial Transplantation or Age-Related Macular Degeneration (AMD)

First Author: Xinyi ***SU***
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Purpose: AMD is a leading cause of vision loss in adults. Evidence from both ex vivo and in vivo animal models suggests that oxidative stress-induced damage plays a key role in mitochondrial dysfunction within RPE cells, contributing to AMD pathology. However, current mitochondrial-targeted therapies have yet to effectively address this dysfunction. We propose a novel approach — the introduction of exogenous mitochondria (exo-mito) into RPE cells to restore mitochondrial function and revitalize damaged tissues.

Methods: To model mitochondrial dysfunction, we used oxidized low-density lipoprotein (ox-LDL), a major component of drusen and a known contributor to AMD onset. Mitochondria isolated from human induced pluripotent stem cells (hiPSCs) were coincubated with oxLDL stressed RPE . Bioenergetics was assessed using seahorse assay. In vivo experiments were performed in wild-type (WT) mice to assess biocompatibility and in retinal degeneration mouse model to assess functional rescue

Results: Our results demonstrate that exo-mito are biocompatible with RPE cells both in vitro and in vivo. Treatment of ox-LDL–damaged RPE cells with exo-mito restored mitochondrial function, as evidenced by improvements in bioenergetics, and total cellular adenosine triphosphate (ATP) with reduced reactive oxygen species levels. Furthermore, intravitreal administration of exo-mito in WT mice resulted in successful uptake by RPE cells in vivo and showed functional rescue in retinal degeneration model.

Conclusions: These findings suggest that mitochondrial transplantation can rescue mitochondrial dysfunction in diseased RPE cells and may offer a promising therapeutic strategy for AMD by addressing underlying pathogenesis.

Abstract No.: 200349
Variations in Gut Microbiota of People With Diabetic Retinopathy (DR) in Asia

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Co-Author(s): Taraprasad ***DAS****, Souvik* ***MUKHERJEE****, Brijesh* ***TAKKAR***

Purpose: The core gut microbiota changes as a healthy individual progresses to diabetes mellitus (DM) and to DR. We compared the gut microbiota in people with DR in India and Asia.

Methods: In a case-control study, we enrolled 548 participants from 17 independent sites in all regions of India. Thirty years or older healthy people (HC) and people with DM with/without DR (cases) were recruited. The fecal samples were processed for metagenomics sequencing after deoxyribonucleic acid (DNA) extraction. Microbiome data were analysed for abundance (>0.5%), the alpha (Shanon, Gini and Richness indices), and the beta diversity (NMDS plot). Results from first 100 participants (HC: 26,

DM: 33 and DR: 41) were compared with the published reports from Asia.

Results: The Indian data showed higher alpha diversity in the DR group, compared to the lower alpha diversity reported from South Central China. Beta diversity plots from all Asian studies consistently demonstrated gut dysbiosis in DR. At phyla level, there were reverse proportions of Actinobacteria (less in India than China) and Firmicutes/Bacteroidetes ratio (higher in India than China). At genera level, there was reduced Bifidobacterium in India and increased Ruminococcus in both countries. Segatella copri, the commonest species detected in India, was not reported from China.

Conclusions: There are variations in gut microbiota in people with DR in Asia. These have potential for differentiating regional gut microbiota biomarker for DR. Further research is needed to use them for specific diagnosis and possible therapy.

PAO

Cataract & Refractive Surgery

Abstract No.: 201354
"Toric SFIOLs": Revolutionizing astigmatism correction.

*First Author: Naren **SHETTY***
*Co-Author(s): Nagesha **C K**, Rohitha **NAYAK**, Abhishek **SHAH***

Purpose: To evaluate the efficacy of toric intraocular lenses (IOLs) for scleral fixation in patients with absent capsular bag support, focusing on reducing astigmatism in eyes with aphakia or undergoing refixation procedures.

Methods: This study included seven eyes with conditions such as aphakia, dislocated toric IOLs, and traumatic cataract with corneal scarring. Toric scleral fixation IOL (SFIOL) implantation was performed using ab-externo 4-point or closed-globe Pierce fixation techniques. Preoperative assessments included corneal astigmatism (mean range: -0.55D to -3.78D), visual acuity, and existing lens status. Postoperative outcomes, including uncorrected visual acuity (UCVA), best-corrected visual acuity (BCVA), and residual refractive error, were documented during follow-up.

Results: Five eyes received Envista toric IOLs, and two eyes received single-piece toric IOLs. All patients demonstrated improved UCVA (6/12) and BCVA (6/8) postoperatively. Refractive astigmatism was significantly reduced, with most eyes achieving minimal cylinder (-0.5 to -1.0D). No major intraoperative or postoperative complications were observed. Imaging studies revealed IOL decentration of less than 500 microns and tilt of less than 5 degrees.

Conclusions: Toric SFIOL implantation demonstrates reliable safety and remarkable precision in restoring both clarity and refractive balance for patients with inadequate capsular support and significant astigmatism. This technique offers a valuable solution for complex anterior segment cases. Toric lenses

of different designs can be effectively fixed in eyes with absent capsular bag leveraging all its advantages.

Abstract No.: 200437
A New Method for Nucleus Extraction in Complicated Cataract Surgery

*First Author: Sara **KAVOUSNEZHAD***
*Co-Author(s): Nader **NASSIRI**, Kourosh **SHEIBANI**, Maryam **YADGARI***

Purpose: To introduce a novel method for extracting nuclei in patients undergoing complex phacoemulsification procedures.

Methods: We employed a new nuclear extraction technique in 107 cases of posterior capsule rupture, extensive subluxation or dislocated lenses, and extracapsular cataract extraction. The procedure involved creating a large partial-thickness corneal groove, followed by capsulotomy and the placement of a preplaced suture. Subsequently, we converted the corneal groove into a full thickness incision, lifted the anterior corneal lip using the preplaced suture to expose the anterior chamber, and inserted two 23-gauge needles from opposite directions into the nucleus body for gradual extraction. Patients were monitored for a minimum of six months postoperatively.

Results: We successfully employed this method in 107 nucleus extractions. No complications were observed during the follow-up period of at least six months.

Conclusions: We have developed a safe, simple, and easily learned method for extracting large subluxated nuclei in patients undergoing complex phacoemulsification procedures. This method has the potential to reduce the risk of vitreous loss.

Abstract No.: 200446
Clinical Outcomes of Refractive Retreatment for Myopic Regression After Corneal Laser Refractive Surgery Among Adult Patients in a Single Eye Center

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*Co-Author(s): Miguel **ANG**, Robert **ANG**, Zoe **DOROY**, James **JACOMINA**, Ryan **TORRES***

Purpose: Report refractive outcomes of refractive surgery options (LASIK, PRK, ICL) in eyes that experienced myopic regression after primary corneal laser refractive surgery Create recommendations for retreatment options for patients

Methods: Retrospective review of patients who underwent refractive treatment for myopic regression Inclusion criteria: Primary myopic and developed refractive regression Underwent retreatment procedures including PRK, LASIK, ICL At least one month follow up after retreatment Exclusion criteria: Hyperopic primary surgery and retreatment Complex topographies (decentered, irregular, small ablation) not correctable to BDVA of 20/20 Less than one month follow up

Results: Interval in months,between initial surgery and retreatment was 71 for LASIK, 58 for PRK, and 83 for ICL. Average UDVA for LASIK patients before retreatment was more than 20/400, more than 20/400 for PRK, and an average of 20/100 for ICL. The average UDVA for patients after retreatment was plano for the LASIK group, with mean refraction between -0.25 and 0.25 for the majority of patients in the short and long term. Post-operative UDVA for the PRK group was also plano with most refractions within the -0.25 and 0.25 range. For the ICL group, post-operative UDVA was also plano with most of the refraction within the -0.25 to 0.25 range.

Conclusions: Retreatment with LASIK, PRK, and ICL is safe and effective, with most patients having a refraction of plano. Time between initial surgery and regression was longer for the LASIK group compared to the other 2 groups.

Abstract No.: 201355
Dendritic cataract

*First Author: Priyanka **PRASAD***
*Co-Author(s): Amber **BHAYANA***

Purpose: The morphology of cataracts can be sometimes specific for the underlying cause; for example, blue dots or sutural opacities are congenital, zonular cataracts are developmental, rosettes are specific to trauma sequelae, and feathery cataracts follow vitrectomy. We describe a new morphology of cataract in subjects with retinal pigmentary changes and dystrophies. We incidentally detected this heretofore never described dendritiform (as it resembles the cyton of a neuron) pattern of posterior sub-capsular cataract in a patient with retinitis pigmentosa and found it specific to some other retinal pigmentary changes described ahead

Methods: The study involved a review of case records (cross-sectional study of incoming clinic patients over 4 months) at a tertiary eye care centre in northern India. Subjects sharing this morphology of cataract had some form of retinal pigmentary changes because of retinal dystrophies, laser sequelae, or self-settled retinal detachments.

Results: This dendritic cataract morphology was noted in subjects with retinitis punctate albicans, retinitis pigmentosa, rod cone dystrophy, self-settled retinal detachment, asymmetric retinitis pigmentosa (more cataract in the eye affected more), lasered retina and retina scarred secondary to cryotherapy (more cataract in eye lasered/scarred more), ocular albinism.

Conclusions: We describe the characteristic features of a unique cataract morphology, "Dendritic cataract", which was very specifically associated with significant primary or secondary retinal pigmentary changesWe hypothesize that the hyperplastic/dysplastic retinal pigment epithelium might be responsible for release of some molecular factors that could target some lens fibers and not the others

Abstract No.: 200438
Eyestrain and Dry Eye after Photorefractive Keratectomy

*First Author: Sara **KAVOUSNEZHAD***
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Purpose: To evaluate the medium-term postsurgical effects of photorefractive keratectomy (PRK) on patients' subjective perception of dry eye and eyestrain.

Methods: In this prospective comparative pre-post study the inclusion criteria were patients with mild to moderate myopia (less than -6 diopters) undergoing PRK. To evaluate the indirect subjective signs of eyestrain and its severity, we used a questionnaire including six questions regarding itching, foreign body sensation, excessive tearing, eye tiredness, blurring, and photophobia. We administered this questionnaire to each patient in face-to-face interviews pre-surgery as well as 1 and 6 months post-surgery. To evaluate post-surgical dry eye, we asked patients if their dry eye symptoms had increased or decreased compared to the pre-surgical period.

Results: A total of 40 patients were assessed in this study. The mean age of patients was 26 ± 8 years, with 16 (40 %) male patients and 24 (60 %) female patients. There was no statistically significant difference in mean eyestrain scores one month ($P = 0.371$) and six months ($P = 0.939$) post-surgery compared to pre-surgery. There was a significant increase in dry eye symptoms at both 1 month ($P = 0.010$) and 6 months ($P = 0.004$) post-surgical follow-ups.

Conclusions: Our results indicate that PRK significantly increases dry eye symptoms compared to the pre-surgical period, up to six months post-operatively. There was no statistically significant difference in eyestrain symptoms among patients compared to the pre-surgical period.

Abstract No.: 200240
IOL Piercings: The Scleral stud Approach for Scleral Fixated IOLs

First Author: Sangeet ***MITTAL***

Purpose: Scleral fixation of intraocular lenses (IOLs) is crucial for cases with deficient capsular support. This study introduces a novel approach—IOL Piercings: The Scleral Stud Technique—using routine sulcoflex C-loop Rayner IOLs, secured with 5-0 Prolene sutures. Inspired by ear piercings, this method combines haptic piercing and 4-flange scleral fixation to enhance stability, reduce trauma, and improve surgical reproducibility.

Methods: A prospective analysis was conducted on 11 patients undergoing secondary IOL implantation using this approach. The procedure involved piercing the haptics of the Rayner IOL with a 5-0 Prolene suture via a 26G needle, followed by scleral fixation under prepared flaps using the 4-flange technique. Intraoperative parameters, IOL stability, centration, and postoperative outcomes were assessed.

Results: Postoperative best-corrected visual acuity improved to an average of 6/9, with successful IOL centration achieved in all cases. Mild, clinically insignificant IOL tilt was noted in two eyes, while no postoperative suture erosions occurred. Elevated intraocular pressure was observed in two eyes at one-week follow-up but was controlled with anti-glaucoma medications. Transient hypotony in two eyes resolved spontaneously, and vitreous cavity hemorrhage was noted in one case. Comparative analysis with conventional scleral fixation highlighted advantages such as improved surgical ease, secure IOL positioning, and reduced operative time.

Conclusions: The IOL Piercings: Scleral Stud Approach provides a stable and efficient method for secondary IOL fixation. By integrating a piercing-inspired design, this technique simplifies the surgical process while maintaining optimal IOL positioning.

Abstract No.: 200477
Ocular Manifestations Of A Family With Marfan's Syndrome And Osteogenesis Imperfecta

First Author: Pia Regina ***GALVANTE***
Co-Author(s): Nikolai Thadeus ***MAPPATAO***

Purpose: To report a case series of a Filipino family with ocular manifestations of Marfan syndrome and osteogenesis imperfecta.

Methods: Comprehensive ophthalmologic evaluation was performed on all patients. Fundus photography was conducted for each individual, and two patients received 360-degree retinal barrier laser treatment. Corneal tomography was performed on one patient to assess corneal structure. All patients were monitored for progression of ocular manifestations related to Marfan syndrome and osteogenesis imperfecta.

Results: The three sons (ages 30, 27, and 22) exhibited blue sclerae, superior ectopia lentis, and lattice degeneration. The second son had lens coloboma in both eyes, pathologic myopia, and lenticular astigmatism. The third son showed lenticular astigmatism and keratoconus in the right eye. Corneal tomography revealed corneal thinning without keratoconus in the second son. No surgical interventions have been performed to date; however, special considerations for scleral-fixated intraocular lens implantation are ongoing due to the integrity of the bluish sclera.

Conclusions: This case series highlights the diverse ocular manifestations of Marfan syndrome and osteogenesis imperfecta, especially in a family with multiple affected members. The presence of vision-threatening features emphasizes the need for early diagnosis and personalized management. Ongoing monitoring is essential to track progression, especially regarding lens subluxation and retinal detachment. Careful attention to scleral integrity is critical for planning potential surgical interventions, such as scleral-fixated intraocular lens implantation.

Abstract No.: 200627
Residents' Perceptions of Using 3D ARTEVO Digital Visualization System vs Conventional Optical Microscope during Phacoemulsification

*First Author: Carlo **NASOL***
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Purpose: This study aimed to evaluate an ophthalmology resident's perceptions and experiences using the 3D ARTEVO digital visualization system compared to the conventional binocular surgical microscope during phacoemulsification surgeries. The focus was on assessing visualization quality, ergonomic benefits, and practical challenges encountered.

Methods: An ophthalmology resident performed phacoemulsification surgeries using both the traditional optical microscope and the 3D ARTEVO system by ZEISS. The 3D ARTEVO provides a high-definition, three-dimensional digital display viewed through polarized glasses, enabling a heads-up surgical posture. The resident's observations regarding visualization, ergonomics, and workflow were documented throughout the procedures.

Results: The resident reported significant advantages with the 3D ARTEVO system, including enhanced contrast, magnification, and an extended depth of field, which improved visualization of fine ocular structures and facilitated more precise surgical maneuvers. The heads-up posture reduced neck and back strain, improving ergonomics and potentially sustaining surgeon comfort and focus during lengthy surgeries. However, challenges included difficulty loading the intraocular lens (IOL) while wearing polarized glasses, as removing them mid-procedure was impractical. Additionally, an air bubble introduced into the anterior chamber impaired depth perception on the 3D display, temporarily complicating surgical tasks.

Conclusions: The 3D ARTEVO digital visualization system offers notable benefits over conventional microscopes, particularly in ergonomics and enhanced visualization, which can improve surgical performance and training. Nevertheless, specific workflow challenges such as IOL handling with 3D glasses and depth perception issues due to air bubbles require adaptation and further training. Overall, the 3D ARTEVO system represents a promising advancement to enhance both surgical performance and training in Phacoemulsification.

Abstract No.: 201269
Surgical outcomes of iris-claw and scleral-fixated intraocular lens implantation in a tertiary government hospital in the Philippines

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*Co-Author(s): Cherry Vhie **ORTEGA**, John Vyle **PASCARAN***

Purpose: This study aims to compare surgical outcomes of retropupillary iris-claw IOL (ICIOL) and sutureless scleral-fixated IOL (SFIOL) implantation in eyes with inadequate capsular and zonular support.

Methods: Medical charts of patients who received ICIOL or SFIOL implantation at the QMMC Department of Ophthalmology from January 2022 to June 2024, with a minimum follow-up period of 3 months, were reviewed retrospectively. Demographic data, pre-existing ocular conditions and surgical indications were described, and post-operative treatment outcomes such as uncorrected visual acuity (UCVA), best corrected visual acuity (BCVA), refraction, astigmatism, complications, and IOL tilt and decentration were compared between the two groups.

Results: 52 eyes were evaluated. Both groups showed significant improvements in UCVA and BCVA at the most recent follow-up visit, but were not statistically different between the two groups. IOL tilt was higher in the SFIOL group, whereas there was no significant difference in IOL decentration. Refractive, corneal, and ocular residual astigmatism were not statistically different between groups. Ovalization of the pupil was the predominant ICIOL complication. Cystoid macular edema was more common in the ICIOL group, while complications

concerning IOL position were more common in the SFIOL group.

Conclusions: Retropupillary ICIOL and sutureless SFIOL are equally efficient and safe visual rehabilitation methods for eyes without capsular and zonular support. ICIOL use, however, may be limited by iris integrity and the limited accessibility of ICIOLs locally, especially in government institutions, hence the capability to execute the SFIOL technique remains a crucial skill for any surgeon.

Abstract No.: 201266
Targeting 1.00 diopter myopia in cataract patients; A tale of 50 cases.

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Purpose: To evaluate the results of targeting 1:00 diopter myopia for both eyes in cataract patents.

Methods: This cross sectional interventional study was conducted from 2023 to 2024. 50 cases (100 eyes) were selected as per inclusion criteria. Following pre-operative assessment, Phacoimulsification with PCIOL (single piece hydrophobic acrylic) implantation was done by temporal incision. Biometry was done by immersion method. Topical antibiotic and steroids were prescribed post-operatively. Surgery in each eye was deferred by at least 01 month. All the surgeries were performed by a single surgeon. All the surgeries were uneventful. Followup was done at POD 1, 15 and 30. The visual acuity at near and distance was noted.

Results: Preoperatively the mean BCVA LogMAR was 0.84 ±0.139. At POD 30, the unaided mean was 0.186±0.040.p value is less than 0.05. 82% had a binocular LogMAR unaided distant visual acuity of 0.20, 16% had 0.1 and 2% had a binocular LogMAR unaided distant visual acuity of 0.30. and in case of near vision, 96% had N6 binocularly and the rest had N8 unaided. 47 (94%) patients out of 50 did not want optical correction for distant or near. 01 (02%) patient wanted optical correction for distant and near vision and 02 (04%) wanted optical correction for near.

Conclusions: Targeting 1 diopter myopia for both eyes is an easy, acceptable and affordable approach to address post-operative optical status in carefully selected patients.

Abstract No.: 200439
Visual Acuity, Endothelial Cell Density and Polymegathism after Iris-Fixated Lens Implantation

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*Co-Author(s): Nader **NASSIRI**, Kourosh **SHEIBANI**, Maryam **YADGARI***

Purpose: To evaluate the visual acuity as well as endothelial cell density (ECD) and polymegathism after iris-fixated lens (Artiflex® AC 401) implantation for correction of moderate to high myopia.

Methods: In this retrospective cross-sectional study, 55 eyes from 29 patients undergoing iris-fixated lens implantation for correction of myopia (-5.00 to -15.00 D) were evaluated. Uncorrected visual acuity, best spectacle-corrected visual acuity, refraction, ECD and polymegathism (coefficient of variation [CV] in the sizes of endothelial cells) were measured preoperatively and 6 months postoperatively.

Results: In the sixth month of follow-up, the uncorrected vision acuity was 20/25 or better in 81.5% of the eyes. The best-corrected visual acuity was 20/30 or better in 96.3% of the eyes, and more than 92% of the eyes had a refraction score of ±1 D from the target refraction. The mean corneal ECD of patients before surgery was 2,803±339 cells/mm2, which changed to 2,744±369 cells/mm2 six months after surgery (p=0.142). CV in the sizes of endothelial cells before the surgery was 25.7%±7.1% and six months after surgery it was 25.9%±5.4% (p=0.857).

Conclusions: Artiflex iris-fixated lens implantation is a suitable and predictable method for correction of moderate to high myopia. There was no statistically significant change in ECD and polymegathism (CV in the

sizes of endothelial cells) after 6 months of follow-up.

Abstract No.: 201176
Visual, Refractive and Satisfaction Outcomes Following Myopic Presbyond Treatment in the Philippines: A Retrospective Cohort Study

First Author: Reginald Robert ***TAN***
Co-Author(s): Nicolette Eunice ***CHUA****, Cristina Erika* ***ELAZEGUI***

Purpose: To determine the visual and refractive outcomes, and patient satisfaction, after Presbyond laser blended vision treatment among Filipino patients with myopia and presbyopia who were managed at a Tertiary Hospital between August 1, 2023 and January 31, 2025. As the hospital is currently the sole provider of Presbyond in the Philippines, this study is uniquely positioned to expand local knowledge of this innovative treatment. To date, no published studies have investigated Presbyond Myopic outcomes in the Philippines; thus, this research will be among the first to provide data on its clinical performance in a local population.

Methods: This is a retrospective cohort study consisting of a medical record review of patients who underwent Myopic Presbyond treatment using Femtosecond LASIK at a Tertiary Hospital in the Philippines between August 1, 2023 and January 31, 2025.

Results: The myopia group achieved 88% UDVA of 20/20 or better, 86% within ±0.50 D of target, and 100% within ±1.00 D. Postoperative stability was high, with minimal regression. Satisfaction averaged 92–96%. Some patients reported mild dry eye and occasional visual disturbances. No eyes lost ≥2 lines of CDVA.

Conclusions: This is the first study in the Philippines examining the visual, refractive, and satisfaction outcomes of Presbyond in the myopic population. Six- month outcomes of Presbyond treatment in Filipino myopic presbyopes demonstrated excellent safety, efficacy, stability, and predictability, with notable spectacle independence and satisfaction at six-months. Further research is required to assess long-term outcomes in these patients.

Cornea & ED

Abstract No.: 200899
A Case of Interstial Keratitis Secondary to Epstein Barr Virus in a Filipino Patient

First Author: Michael ***BRAVO***
Co-Author(s): Steffani Krista ***CHUA****, Jerome Francis* ***FLORES****, Juan* ***LOPEZ****, Peter Lloyd* ***MALLARI***

Purpose: To present a case of Epstein Barr (EBV) keratitis in a Filipino patient

Methods: This is a case report.

Results: A 25-year-old Filipino male presented with a 2-month history of progressive bilateral blurring of vision accompanied by eye redness, itchiness, tearing, and photophobia. Examination revealed nummular corneal opacities with conjunctival hyperemia and stromal pannus formation. Best-corrected visual acuity (BCVA) was counting fingers on the right eye and 20/70 on left eye. Initially managed as a case of nummular keratitis, the patient was started on moxifloxacin and steroid eye drops. However, worsening of visual acuity prompted the patient to be shifted to topical and oral antiviral medications, which resulted to improved vision. EBV immunoglobulin(Ig) G and IgM testing resulted positive, hence the patient was managed as a case of EBV keratitis. Corneal neovascularization was treated with subconjunctival anti-vascular endothelial growth factor. At one month follow-up, BCVA was 20/20 on both eyes.

Conclusions: While EBV is common worldwide, specific data on EBV keratitis in the Philippines is limited. Given a high index of suspicion, serum immunoassay testing is essential in confirming the diagnosing of EBV infection. Early detection and proper management of EBV keratitis could prevent corneal scarring and visual disability in these rare cases.

Abstract No.: 200300
Association of Swept Source Anterior Segment Optical Coherence Tomography Patterns with Etiology, Corneal and Infiltrate Thickness, and Treatment Response in Infectious Keratitis: a Cross-Sectional Study

First Author: John Philip ***LIM***

Purpose: Swept Source Anterior Segment Optical Coherence Tomography (SSAS-OCT) is a non-invasive imaging modality that has emerged as a novel tool in the diagnostic armamentarium of anterior segment pathologies, including infectious keratitis. This study aimed to determine whether SS AS-OCT imaging patterns are associated with etiology, severity, and treatment response in infectious keratitis, potentially aiding diagnosis and improving treatment outcomes.

Methods: This retrospective analytical observational cross-sectional study was conducted at the DOH Eye Center - East Avenue Medical Center, Philippines from January 2023 to February 2024. Electronic data records detailing the clinical presentation of each participant along with corresponding AS-OCT qualitative and quantitative imaging scans were enrolled and analyzed.

Results: A total of 55 eyes of 54 patients were included in this study. Certain SSAS-OCT features were strongly linked with fungal infections. Epithelial hyperreflective punctate lesions were significantly more frequent in fungal infections (66.67%). Similarly, hyperreflective lesions attached to the corneal endothelium were significantly associated with fungal (66.67%) and mixed infections (71.43%). Subepithelial hyporreflective (cystic) spaces were noted in all fungal cases and 78.57% of mixed cases, highlighting a significant association.

Conclusions: SSAS-OCT patterns offer promising diagnostic and prognostic value in infectious keratitis management. Certain OCT markers appear to aid in identifying fungal infections, while others may predict poor treatment outcomes across different etiologies. Quantifying changes in corneal and infiltrate thickness over time can provide clinicians with objective data to assess treatment response and tailor interventions. These findings suggest that SSAS-OCT could be used to monitor infectious keratitis.

Abstract No.: 201180
Case Report on Ophthalmologic Manifestations in Eczema Herpeticum

First Author: Juan Paulo ***RIEGO DE DIOS***
Co-Author(s): Victor Ephraime ***PAULINO***

Purpose: Eczema herpeticum is a rare complication of atopic dermatitis, brought about by cutaneous infection of the herpes simplex virus. It commonly affects the head, neck, chest and arms. There have been few recorded instances of excessive eyelid involvement, and thus, ophthalmological management of eczema herpeticum has not been as thoroughly discussed compared to its dermatological counterpart. However, because of the severity of complications involving the eye, including but not limited to decrease of complete loss of vision, it is prudent to discuss proper management to minimize eye-related morbidities.

Methods: The patient is a 31-year old Icelandic male with history of atopic dermatitis and bronchial asthma. He presented with a 4-day history of of multiple, painful pruritic erythematous vesicles on the face, primarily on the eyelids. These lesions developed into punched out erosions on the periorbital area. Initial management included confirmatory tests, and treatment of intravenous acyclovir, topical antibiotics, oral antihistamine, supportive medication and cleaning of the affected areas.

Results: Upon referral to the ophthalmology service, there was note of the development of blepharoconjunctivitis, for which he was started on tobramycin/dexamethasone eye drops and sodium hyaluronate eye drops. With the above management, there was noted gradual decrease in the lesions. Although rare, ophthalmologic involvement in eczema herpeticum must be considered when

presented with an atopic patient presenting with periorbital lesions.

Conclusions: As in this case, early treatment with antivirals with aggressive supportive treatment helped in speeding up the recovery and prevented severe sight-threatening complications.

Abstract No.: 200663
Clinical Profile of Microbial Keratitis Patients at a Tertiary Hospital in Manila

First Author: Elenor Reina ***ALEGRE***
Co-Author(s): Jason Lorenzo ***LUMABAS***

Purpose: Microbial keratitis remains a significant cause of ocular disability as it is a leading cause of corneal opacity worldwide. This study determined the clinical profile of microbial keratitis patients at a tertiary hospital in Manila and determined the most probable cause of the infection.

Methods: This study is a single-center, retrospective chart review of newly diagnosed patients with microbial keratitis in a tertiary hospital in Manila. The study described the demographics and clinical characteristics of 79 patients referred to an External Disease and Cornea specialist from January 2019 to December 2023.

Results: The results of the study showed that most patients were male (78.48%) with a mean age of 43 years old. Ocular trauma was the most common risk factor (31.65%), followed by contact lens use (11.39%), with 43.04% having no known risk factors. Unilateral involvement was prevalent (97.47%). A significant portion (46.84%) presented with poor initial visual acuity (HM to 10/200, often due to central corneal opacity (55.70%). Presumed etiologies were predominantly bacterial (74.68%) and polymicrobial (20.25%).

Conclusions: The study concludes that microbial keratitis remains a public health concern, mainly affecting middle-aged males in high-risk occupations, consistent with global trends. Limitations of the study include its retrospective nature and lack of culture and sensitivity results. Future prospective studies with standardized diagnostic methods are recommended.

Abstract No.: 200468
Corneoscleral Patch Graft Using an Anterior Lamellar Button from Descemet Stripping Endothelial Keratoplasy Donor Tissue in a Case of Corneal Perforation After Limbal Dermoid Excision

First Author: Raynon Arthur ***DECANO***
Co-Author(s): Richard Raymund ***NEPOMUCENO***

Purpose: To describe the management and post-operative course of a pediatric patient with corneal perforation following limbal dermoid excision, emphasizing the viability of anterior lamellar buttons from Descemet stripping endothelial keratoplasty (DSEK) donor tissue as an alternative surgical approach, and highlighting the role of amblyopia therapy in achieving optimal visual outcomes.

Methods: A 3-year-old male presented with corneal perforation and uveal prolapse two weeks after limbal dermoid excision. Although penetrating keratoplasty (PKP) is traditionally the ideal surgical management, it was not feasible in this case. An anterior lamellar button, harvested from available DSEK donor tissue, was utilized for corneoscleral patch grafting as an alternative solution.

Results: Post-operatively, the patient demonstrated successful tectonic stabilization, restoration of globe integrity, and significant cosmetic improvement. Visual acuity improved from 20/320 to 20/100 over an 18-month follow-up period. Persistent high astigmatism necessitated ongoing amblyopia therapy, underscoring its critical importance in pediatric patients undergoing lamellar grafting. Literature corroborates the efficacy of lamellar grafts, especially when conventional donor tissues are limited, reporting positive outcomes in structural stability, cosmesis, and visual acuity.

Conclusions: Anterior lamellar grafts derived from DSEK donor tissue represent a practical and effective surgical alternative for pediatric corneal perforations occurring after limbal

dermoid excision when conventional PKP is not possible. Coupled with diligent postoperative amblyopia therapy, this approach reliably ensures structural integrity, cosmetic improvement, and visual rehabilitation, making it especially valuable in low-resource settings.

Abstract No.: 200846
Keratometric Stability after Pterygium Excision with Conjunctival Autograft

First Author: Richard Raymund ***NEPOMUCENO***
Co-Author(s): Julian David ***CABRERA***

Purpose: To determine when keratometric stability is achieved following pterygium excision with conjunctival autograft.

Methods: This prospective observational study enrolled patients who underwent pterygium excision with conjunctival autograft at a tertiary-level eye center. Patients were evaluated for baseline characteristics and keratometric data (K1, K2, Km [mean k], and ΔK [corneal astigmatism]) at 1 week, 2 weeks, and monthly for 3 months using the Zeiss IOLMaster 700 & Oculus Keratograph 5M. Clinically stable keratometry per patient was defined as changes in these parameters of less than 0.25 on consecutive visits.

Results: 32 eyes of 32 patients were included. Overall sample analysis showed that ΔK had a statistically significant decrease across the 3-month follow-up ($p<0.001$). Individual data analysis showed that 23/32 cases (71.88%) achieved stability on K1 & ΔK, while 27/32 (84.38%) achieved stability on K2, Km by 2 months. There was a significant association between higher pterygium grade and time to Km stability ($p=0.0421$). Higher grades also tended to show longer time to stability of ΔK ($p=0.04$). Greater thickness was found to be associated with time to K2 stability ($p=0.0332$). Visual acuity (UCVA and BCVA) showed statistically significant improvement over time ($p<0.001$ and $p=0.0209$), but the number of patients achieving clinically meaningful improvement (≥0.20 logMAR) remained low.

Conclusions: Total sample data showed that ΔK significantly decreased post-operatively. Individually, majority of patients achieved keratometric stability 2 months after surgery. Larger and thicker pterygia may need a longer time to achieve keratometric stability. Additional and longer-term studies are recommended to corroborate findings.

Abstract No.: 201270
OPHTHALMOLOGIC MANIFESTATIONS OF XANTHOMA DISSEMINATUM IN A YOUNG FILIPINO FEMALE

First Author: Vincent ***TE***
Co-Author(s): Kent ***FLORENTINO****, Kristine Joy* ***IRAOLA-DAVOCO****, Ruben* ***LIM BON SIONG****, George Michael* ***SOSUAN***

Purpose: To report the first documented case of xanthoma disseminatum with ophthalmologic manifestations in an adult female in the Philippines

Methods: Case report

Results: A 42-year-old Filipino woman presented with bilateral yellow conjunctival and upper eyelid masses, accompanied by redness and foreign body sensation. She also developed persistent, pruritic, red-yellow papules and nodules over the axilla, forearms, wrists, and thighs, along with intermittent globus sensation and hoarseness four months prior. Dermatologic evaluation, including a skin biopsy, revealed xanthomas, and she was initially managed with oral statin therapy. This led to empirical treatments in different clinics for presumed keratoconjunctivitis and phlyctenulosis, without improvement. Ophthalmologic examination showed red-yellow nodular lesions on the conjunctiva and upper eyelids. Videostroboscopy further identified multiple nodular pharyngeal lesions. Excision biopsies of the conjunctival and eyelid lesions demonstrated round cell proliferation, strongly positive for CD68 and negative for pancytokeratin, consistent with xanthogranulomatous inflammation. This, combined with the mucocutaneous and ocular involvement, supported a final diagnosis of Xanthoma Disseminatum. The patient was prescribed topical lubricants for symptomatic relief and scheduled for excision of recurrent

conjunctival lesions for cosmesis. A multi-disciplinary work-up was initiated to assess involvement of other organ systems. Upon completion, systemic immunosuppressive therapy with Cladribine is planned.

Conclusions: Xanthoma disseminatum is a rare, non-Langerhans cell histiocytosis with multisystemic involvement that can initially present with ocular manifestations. Early recognition is pivotal, as they may precede systemic symptoms. Diagnosis relies on characteristic clinical and immunohistopathologic features. Due to the lack of standardized treatment, management requires interdisciplinary collaboration.

Abstract No.: 200825
Out of Place: Bilateral Ectopia Lentis as the Presenting Feature of a Suspected Marfan Syndrome in an Index Pediatric Case

*First Author: Nicolo **PADERNA***
*Co-Author(s): Billie Jean **CORDERO**, Hana Vienne **GECOSALA**, Carlo Christopher **LUALHATI***

Purpose: To present a case of Bilateral Ectopia Lentis (EL) in a 9-year-old pediatric index patient (no family history) with suspected Marfan Syndrome (MFS) without evidence of aortic root dilation or FBN1 mutation testing, who underwent lensectomy, IOL implantation, transscleral-sutured capsular tension ring (CTR) in the left eye.

Methods: Thorough physical & ophthalmologic examination was performed. The Revised Ghent Criteria (2010) was used as the diagnostic criteria for MFS. Chest X-ray & 2D-echocardiography were performed to evaluate cardiovascular involvement. FBN1 testing was not done. Surgical planning to address len subluxation & impaired visual acuity was done. A multidisciplinary approach was devised for further management.

Results: Physical examination revealed the presence of 3 out of 5 facial characteristics seen in MFS (downslant palpebral fissures, malar hypoplasia, retrognathia). Positive "thumb & wrist signs", skin striae, & reduced elbow extension revealed a Systemic Score of ≥7 which reveals significant systemic involvement consistent with MFS based on the Revised Ghent Criteria. Ophthalmologic examination showed impaired BCVA of 20/70-1 on both eyes with the presence of a Bilateral Superonasal EL. Based on the findings, an impression of Suspected MFS was made. Surgical correction was performed using Lensectomy, Sulcus IOL Implantation, Sutured CTR on the Left Eye with post-op BCVA of 20/70.

Conclusions: Despite the absence of confirmatory genetic testing, this case emphasizes the role of the ophthalmologist in identifying systemic connective tissue disease through ectopia lentis. Surgical correction can restore vision in pediatric patients with severe lens instability. Systemic evaluation & surveillance are essential in guiding long-term care.

Abstract No.: 200847
Post-Keratoplasty Medical Management: Survey of Current Practice Patterns in the Philippines

*First Author: Ruben **LIM BON SIONG***
*Co-Author(s): Ivo John **DUALAN**, Bobbie Marie **SANTOS**, George Michael **SOSUAN***

Purpose: Optimizing postoperative management is essential to reduce complications and prolong graft survival after corneal transplantation. To address gaps in local research, we surveyed corneal surgeons in the Philippines to determine practice patterns for steroid and antibiotic use following keratoplasty, and their strategies for managing ocular hypertension and graft rejection.

Methods: A cross-sectional online survey was distributed to cornea surgeons accredited by the Eye Bank Foundation of the Philippines, Inc. Responses were collected via Jotform (San Francisco, CA) from September 24 to October 8, 2024.

Results: Of 58 respondents (85% response rate) from 12 regions, 45% had over 15 years of practice. All performed penetrating keratoplasty (PKP), with fewer performing DALK (33%),

DSEK (24%), and DMEK (19%). Prednisolone acetate 1% was the preferred topical steroid. Frequency varied by keratoplasty type and rejection risk, with once to twice daily dosing maintained beyond 12 months. Levofloxacin 0.5% was the preferred standalone antibiotic over combination drops. Most surgeons continued antibiotics while sutures remained, beyond 12 months for PKP (60%), until 6 months for DALK (63%), and until 1 month for EK. For ocular hypertension, 55% initiated glaucoma medications, primarily beta-blockers (71%). Topical steroids were first-line for graft rejection in PKP (72%) and lamellar keratoplasty (74%), with 78% preferring hourly dosing.

Conclusions: This is the first study on post-keratoplasty medical management in the Philippines. The findings reveal variations in postoperative regimens, highlighting the need for further research and development of local guidelines.

Glaucoma

Abstract No.: 200463
A Complex Case of Secondary Glaucoma Drainage Device Implantation in a Post Penetrating Keratoplasty Patient with Secondary Angle Closure from Ice Syndrome

*First Author: Nilo Vincent **FLORCRUZ***
*Co-Author(s): Anna Victoria **SAN PEDRO**, Lee Tomas **TAN***

Purpose: A Case Report of a Complex Case of Secondary GDD Implantation that resulted in post operative hypotony and hemorrhagic choroidal detachment. They patient underwent external drainage and old tube explantation resulting in the resolution of the choroidal detachment.

Methods: 76 year old female diagnosed with Bilateral ICE Syndrome and Secondary Ange Closure Glaucoma She underwent penetrating keratoplasty and multiple glaucoma surgeries on the left eye including a primary GDD implantation (AADI) The VA on the left eye was 20/191 correcting to 20/160 Her IOP on the left eye was still uncontrolled on maximum tolerated medications at 31

Results: A secondary GDD implantation using an Ahmed FP7 placed superonasally to control the IOP was performed Post op, the VA dropped to hand movement, the anterior chamber was shallow and IOP was hypotonic The patient was noted to have a hemorrhagic choroidal detachment. The patient underwent external drainage of the the left eye and ligation of the secondary tube. A view of the retina was seen on the table. Due to persistent hypotony, the old tube was explanted.The preop VA returned and choroidal detachment resolved fully.

Conclusions: There are multiple factors that may cause post op hypotony in complex cases of secondary glaucoma for GDD implantation. In placement of a secondary GDD, checking the flow of the primary GDD is important. In patients with a previous trabeculectomy site, careful manipulation of the conjunctiva must be performed. The timely co-management of hemorrhagic choroidal detachment with fellow subspecialty colleagues is important in complex cases

Abstract No.: 200962
A Rare Case of Spontaneous Malignant Glaucoma in a Young Male with Suspected Regressed ROP or Retinal Dystrophy

*First Author: Anton Kyle **ORFANEL***

Purpose: To share an unusual case involving malignant glaucoma that developed spontaneously in a young adult with no prior ocular surgery, but with background findings suggesting early-onset retinal disease.

Methods: A 21-year-old male, reportedly born prematurely at six months AOG, came to our institution with complaints of severe right eye pain and vision loss. He had no surgical history, but relatives had noted longstanding poor vision, nystagmus, and progressive changes since childhood. Initial examination revealed markedly shallow anterior chambers, high intraocular pressures, and optic nerve pallor. Medical therapy was initiated, but due

to minimal response, the patient eventually underwent pars plana vitrectomy and lensectomy in the affected eye.

Results: Despite full medical management, intraocular pressure remained elevated and the anterior chamber stayed shallow. Fundus evaluation showed pigmentary changes and vessel attenuation suggestive of an underlying retinal dystrophy, possibly related to regressed ROP. The left eye was already NLP. Following surgery, the patient reported resolution of pain, and IOP stabilized below 12 mmHg in the right eye. Fluorescein angiography is planned once the cornea clears to further assess the retinal status.

Conclusions: What makes this case distinct is the development of malignant glaucoma in a non-operated, young adult eye, a rare presentation. The presence of retinal findings consistent with regressed ROP or a dystrophic process raises questions about possible predisposing factors. This case emphasizes the importance of recognizing atypical presentations and acting promptly when conventional causes are absent.

Abstract No.: 200432
Enhancing Ophthalmology Education through a Mobile Flipped Classroom: A New Teaching Method

*First Author: Sara **KAVOUSNEZHAD***
*Co-Author(s): Nader **NASSIRI**, Kourosh **SHEIBANI**, Maryam **YADGARI***

Purpose: To evaluate the effects of a mobile flipped classroom model on learning outcomes and satisfaction for teaching optical coherence tomography (OCT) interpretation skills in glaucoma.

Methods: In this quasi-experimental pre/post-test study, a total of 22 ophthalmology residents participated in a 4-session mobile flipped classroom educational intervention (90 min/session) and were assessed on OCT interpretation. Learning was measured via pre/post-tests designed by a panel. Satisfaction was assessed using a validated questionnaire.

Results: Mean participant age was 29.42 (± 2.09) years. Compared to pre-intervention, post-test scores showed significant improvement after the mobile flipped classroom ($p < 0.001$). Mean satisfaction score was 74.05 (± 16.09), denoting high satisfaction.

Conclusions: Implementing a mobile flipped classroom significantly improved OCT interpretation skills and was associated with high satisfaction ratings among ophthalmology residents. This model shows promise for enhancing clinical knowledge in graduate medical education.

Abstract No.: 200428
Primary Angle Closure Glaucoma in patients with Retinitis Pigmentosa: Case Series

*First Author: Geraldine Clare Marie **NEGRE***
*Co-Author(s): Manuel Benjamin **IBANEZ IV**, Orlando Louis **UY***

Purpose: To describe the clinical presentation, management, and outcomes of patients with concurrent Retinitis Pigmentosa (RP) and Primary Angle-Closure Glaucoma (PACG), and to highlight diagnostic challenges and considerations in this subgroup.

Methods: This case series includes three patients with RP diagnosed clinically and genetically, who presented with features of PACG. Comprehensive ophthalmologic examinations were performed, including intraocular pressure (IOP) measurement, gonioscopy, optical coherence tomography (OCT), visual field perimetry, and electroretinography.

Results: All patients demonstrated characteristic RP findings such as bony spicule pigmentation. Anatomical predispositions to angle closure—shallow anterior chambers and iridotrabecular synechiae—were identified. Intraocular pressure was elevated in all cases, with visual acuity ranging from good (20/30) to poor (no light perception). Management involved trabeculectomy and/or phacoemulsification with or without goniotomy. Notably, IOP was well-controlled postoperatively in all patients without the

need for topical medications. However, visual prognosis was limited in two cases due to advanced glaucomatous damage at presentation.

Conclusions: The co-occurrence of RP and PACG presents a diagnostic challenge due to overlapping clinical features, particularly in evaluating optic nerve cupping and visual field defects. Early recognition and aggressive management of angle closure are critical in preventing additive vision loss. Clinicians should maintain a high index of suspicion and perform gonioscopy in RP patients with suggestive anatomical traits.

Abstract No.: 200703
Split Retinal Nerve Fiber Layer Bundles: A Potential Pitfall in Glaucoma Diagnosis

First Author: Ngoc Phuong Vy ***LY***
Co-Author(s): Thao Huong ***NGUYEN****, Truong Dang Minh* ***PHAM***

Purpose: Split retinal nerve fiber layer (RNFL) bundles were described in normal eyes, primarily in young people. This phenomenon is physiologic rather than pathologic. We describe an ocular hypertension (OHT) patient with split RNFL bundles that could lead to glaucoma misdiagnosis.

Methods: Case report.

Results: A 22-year-old female sought a regular eye check-up due to her history of OHT/glaucoma suspect and moderate myopia three years ago. Tafluprost eye drops were indicated. She adhered well to treatment, stabilizing intraocular pressure between 13 and 15mmHg and maintaining 6/6 best-corrected visual acuity. Her sister was diagnosed with bilateral OHT and myopia. Her right and left eye's spherical equivalent was -4.5D and -5.25D and central corneal thickness was 490 and 494µm, respectively. The anterior segment was unremarkable, with open anterior chamber angles. The optic disc was tilted bilaterally with optic cup enlargement and normal macula. Optical Coherence Tomography (OCT) revealed bilateral superior peripapillary RNFL thinning compared to normal values. The superior segment had split RNFL bundles in the RNFL thickness maps and a double-hump pattern in the RNFL thickness graph. Her sister also had the same RNFL pattern. OCT macula scans and visual field returned normal. A diagnosis of previous OHT/moderate myopia was made. She was advised to stop Tafluprost and return for follow-ups.

Conclusions: Split RNFL bundles are a variation that can lead to red disease by giving the appearance of local RNFL defects. This configuration should be considered when interpreting OCT results, especially in glaucoma suspects.

Abstract No.: 200435
The Relationship between Serous Choroidal Detachment and the Ahmed Glaucoma Valve Failure

First Author: Maryam ***YADGARI***
Co-Author(s): Sara ***KAVOUSNEZHAD****, Nader* ***NASSIRI****, Kourosh* ***SHEIBANI***

Purpose: To investigate the effect of serous choroidal detachment (SCD) on the success of Ahmed glaucoma valve (AGV) implantation.

Methods: Patients who underwent AGV implantation and developed SCD were included in the case group. The control group was matched based on age, sex, baseline intraocular pressure (IOP), glaucoma type, and the number of glaucoma medications. The patient data were retrospectively extracted from available records. The primary outcome measure was an AGV success rate based on 5 < IOP <18 and a 20% reduction from baseline.

Results: Seventeen patients were enrolled in the case group and 38 in the control group. Preoperative visual acuity of patients was 1.17 ± 0.43 and 1.16 ± 0.37 logMAR in the case and control groups, respectively. The patients in the case group showed higher mean IOP at all time intervals compared to controls. However, the mean IOP only reached a statistically significant difference at 3 months (17.94 ± 6.78 mmHg vs. 13.39 ± 3.09 mmHg, P = 0.003). The mean survival duration was significantly shorter in patients with SCD (10.4 ± 0.7 months vs. 11.7

± 0.2 months for controls log-rank = 4.1, P = 0.04). The cumulative probability of success was 76.5% in patients with SCD and 94.7% in the control group after 12 months.

Conclusions: SCD after AGV implantation could be a risk factor for failure. A larger prospective study with a longer follow-up duration is required to confirm the present study results.

Abstract No.: 201139
"Parking" an Ahmed Valve TM in a Pediatric Patient with Sturge-Weber Syndrome: A Case Report

First Author: Jose Ma. ***MARTINEZ***
Co-Author(s): Elyse Dorothy ***ANSELMO****, Mae Rovilynn* ***CRUZ****, John Mark* ***DE LEON***

Purpose: To describe the surgical course of Sturge-Weber Syndrome (SWS) in a pediatric patient with glaucoma

Methods: Case report

Results: A 7-year-old female with a right-sided facial port-wine stain presented with uncontrolled intraocular pressure (IOP) of the right eye. Visual acuity was 20/20 on both eyes; the cup-to-disc ratio was 0.7 (right) and 0.5 (left) and gonioscopy revealed prominent ciliary body bands in all quadrants bilaterally. Timolol and Bimatoprost eye drops were started on the right eye, however, with poor compliance. Due to persistently elevated IOP, an Ahmed FP8 TM glaucoma drainage device (GDD) was implanted. On postoperative day 1, choroidal hemorrhage and anterior chamber (AC) shallowing developed requiring urgent AC reformation and proximal GDD tube ligation. Despite deepening of the AC, progressive choroidal hemorrhage recurred one day after, prompting an immediate second AC reformation. The tube was then withdrawn from the AC and tucked ("parked") under the subconjunctival space. One week after, IOP elevation, persistent AC shallowing and choroidal hemorrhage were still observed. She was started on oral steroids which led to resolution of choroidal hemorrhage. The AC depth was maintained and IOPs were well-controlled with Tafluprost and Dorzolamide. This "parked" tube is accessible for AC reinsertion whenever clinically indicated in the future.

Conclusions: This case highlights the stormy surgical course and postoperative challenges in managing glaucoma associated with SWS. If complications arise due to GDD insertion, "parking" the tube by tucking it under the subconjunctival space is a safe and reversible option.

Neuro ophthalmology

Abstract No.: 201082
Implantable Self-Powered Composite Scaffold Based on Nanozyme Hydrogel: Promoting Optic Nerve Regeneration via Multiplex Synergistic Effects in Immunomicroenvironment Regulation

First Author: Ningli ***WANG***
Co-Author(s): Jian ***WU****, Jing* ***WU***

Purpose: Retinal ganglion cells (RGCs) exhibit inherently limited regenerative potential, and the inhibitory microenvironment post-injury further impedes optic nerve regeneration, posing a major challenge in neuroregeneration research. This study aims to develop an innovative therapeutic strategy to address these critical obstacles and enhance functional repair of the injured optic nerve.

Methods: A novel self-powered composite scaffold was engineered, integrating three key functional components: a multifunctional iron-zinc nanozyme hydrogel with high-efficiency reactive oxygen species (ROS) scavenging capacity, a self-powered microbattery designed to deliver sustained and modulated electric fields, and electrospun fibrous matrices loaded with the natural anti-inflammatory compound rutin. This integrated system was constructed to achieve spatiotemporally controlled therapeutic effects.

Results: The nanozyme-doped hydrogel exhibits 0.52 N cm^{-1} adhesiveness. The scaffold has 78 % stretchability; its conductive layer maintains 2.48 S m^{-1} conductivity under

stretching, facilitating signal transmission. The electrospun layer achieves 24.3 Mg g^{-1} drug loading (79% encapsulation), with 43 % rutin released within 3 days and sustained long-term release. Outputting 0.5 V stably, the scaffold regulates the microenvironment. Its adhesiveness/conductivity enable physiological signal detection . ABTS/TMB/DPPH assays validate antioxidant capacity.

Conclusions: This self-powered composite scaffold regulates the injured microenvironment through multiple coordinated mechanisms, including anti-inflammatory modulation, ROS scavenging, and electrical stimulation. It not only improves RGC survival but also robustly drives optic nerve axon regeneration, offering a promising and innovative therapeutic platform for clinical optic nerve repair.

Abstract No.: 200717
Orbital Myopericytoma presenting as Optic Atrophy secondary to Unilateral Compressive Optic Neuropathy: A Case Report

*First Author: Clarissa Marie **TADY***
*Co-Author(s): Huey **JAVIER***

Purpose: This case report presents a rare case of orbital myopericytoma, a benign vascular tumor typically found in the extremities presenting as optic atrophy secondary to compressive optic neuropathy.

Methods: A 46-year-old female with a history of 2 year painless gradual blurring of vision of the right eye underwent comprehensive ophthalmologic evaluation including optical coherence tomography (OCT) of the optic nerve, visual field test (VFT), magnetic resonance imaging (MRI), and surgical treatment. A transnasal endoscopic surgery approach was performed to excise the mass. The diagnosis was established through histopathologic and immunohistochemical evaluation.

Results: OCT of the right optic nerve revealed marked thinning in all quadrants. MRI revealed a 1.6cm x 1.1cm x 1.5cm enhancing mass lesion in the medial extraconal space compressing the intraorbital segment of the optic nerve. Immunohistochemistry showed positive cells of interest for smooth muscle actin and caldesmon and was negative for other markers (S100 and CD34), confirming the diagnosis of myopericytoma. Postoperatively, patient's visual acuity improved which was confirmed by visual acuity testing and VFT.

Conclusions: Orbital myopericytoma is extremely rare with only four cases published to date and should be considered in the differential diagnosis of orbital masses. Complete resection of the mass remains the treatment of choice with a favorable response producing an improvement in the blurring of vision. This is the first case in literature wherein total resection was achieved using transnasal endoscopic approach making this a less invasive alternative to traditional orbitotomy if the tumor's size and location are suitable.

Abstract No.: 201372
Profile and Outcomes of Patients with Pituitary Adenoma Referred to the Neuro-Ophthalmology Service at the Philippine General Hospital

*First Author: Karen **REYES***
*Co-Author(s): Zadkiel **VELASQUEZ***

Purpose: This study aims to present the number and diagnoses of patients seen by the Neuro-Ophthalmology Service from January to December 2024, describe key findings based on visual acuity, visual fields, and OCT parameters (RNFL and GCL thickness), and correlate post-operative changes in visual acuity with baseline OCT and visual field results.

Methods: Charts of pituitary adenoma patients referred to the Neuro-Ophthalmology Service from January to December 2024 were reviewed for demographics, diagnosis, interventions, and baseline and post-op visual acuity, visual fields, and OCT (RNFL and GCL) data.

Results: The average baseline mean deviation (MD) was -13.13 dB, improving to -8.26 dB post-op in 5 patients, with 4 showing visual field gains. Visual acuity improved in 6 patients but remained unchanged in 5. Baseline OCT was available in 13 patients. Average RNFL

was 85.08 µm, decreasing to 66.17 µm post-op (6 eyes). VA improved in 6 eyes with RNFL >75 µm and 3 with <75 µm. GCL averaged 69.04 µm at baseline and dropped to 59.83 µm post-op. VA improved in 7 eyes with GCL 55–77 µm and 1 with >77 µm, while others showed no improvement.

Conclusions: Most patients showed improved visual acuity and visual fields post-operatively, though only a few had follow-up labs. OCT findings revealed RNFL thinning in most and GCL thinning in all cases. Many patients remain on the OR waitlist, with some experiencing vision decline while awaiting surgery.

Abstract No.: 200921
X Marks The Spot: When Vision Loss Starts at the Chiasm

*First Author: Buenjim **MARIANO***
*Co-Author(s): Gabrielle Marie **HEREDIA***

Purpose: To describe a diagnostically challenging case of acute, painless monocular vision loss and to emphasize the importance of considering retrobulbar pathology when clinical and imaging findings are incongruent.

Methods: A 57-year-old Micronesian male with a history of smoking presented with sudden right eye vision loss upon waking, persisting for one month. He was initially diagnosed with branch retinal vein occlusion (BRVO) and referred for further evaluation. A detailed ophthalmic examination, multimodal imaging, perimetry, and neuroimaging were performed to clarify the diagnosis.

Results: On examination, right eye visual acuity was reduced to hand motion with intact light perception. Fundus photography and fluorescein angiography were unremarkable. Optical coherence tomography (OCT) showed superior extrafoveal thickening, diffuse ganglion cell layer thinning, and normal average retinal nerve fiber layer thickness. The discrepancy between clinical findings and retinal imaging prompted further investigation. Visual field testing revealed a junctional scotoma suggestive of chiasmal involvement. Brain MRI identified a 3.7 × 3.9 × 4.9 cm predominantly cystic sellar-suprasellar mass with peripheral enhancement, compressing the optic chiasm and tracts—findings consistent with a pituitary macroadenoma, possibly with hemorrhagic components.

Conclusions: This case underscores the need to maintain a broad differential in cases of monocular vision loss, particularly when ocular findings are minimal or inconsistent with the clinical presentation. Compressive lesions such as pituitary macroadenoma may mimic retinal pathology. Prompt neuroimaging is essential when retrobulbar involvement is suspected, to enable timely diagnosis and management.

Orbital and Oculoplastic Surgery

Abstract No.: 201134
Atypical Periorbital Swelling: A Case of Granulomatosis with Polyangiitis with Unilateral Loss of Vision due to Posterior Ischemic Optic Neuropathy

*First Author: Juan **LOPEZ***
*Co-Author(s): Marco **FLORIDO**, Marco **TUMALAD***

Purpose: To describe the clinical course of a patient with ocular granulomatosis with polyangiitis (GPA) and highlight the diagnostic dilemma due to its overlap with ocular tuberculosis (TB).

Methods: Case Report

Results: A 36-year-old female with no chronic illnesses presented with a 2-month history of progressive bilateral eye swelling and proptosis, worse on the left. She had no visual complaints but reported cough, colds, and bilateral hearing loss. Initially treated as orbital cellulitis, she was referred due to poor response to therapy. Laboratory workup showed normal WBC but elevated ESR and CRP. Chest X-ray raised suspicion for pneumonia or TB. Biopsy and debulking revealed chronic granulomatous inflammation with caseation necrosis, leading to a provisional diagnosis of ocular TB, and anti-TB treatment was started. Despite therapy, swelling persisted and the patient developed

sudden left eye vision loss after three weeks. Funduscopy showed a pale optic nerve. With continued poor response, further workup showed peripheral vasculitis on fluorescein angiogram, negative sputum GeneXpert and P-ANCA, but positive C-ANCA. This supported a diagnosis of GPA, explaining the constellation of eye swelling, respiratory symptoms, and hearing loss. Vision loss was attributed to posterior ischemic optic neuropathy from vasculitis-related vessel occlusion. Oral steroids led to full resolution of eye swelling, but loss of vision was permanent.

Conclusions: In TB-endemic areas like the Philippines, GPA can mimic ocular TB. These conditions share ocular signs, histopathologic features, and systemic symptoms. Careful assessment of treatment response and systemic involvement is essential in these cases.

Abstract No.: 201247
Needle Over Scalpel: Sclerosing Agents Changing the Game in Congenital cystic eye

*First Author: Gajashree **S***
*Co-Author(s): Anuj **MEHTA**, Harshita **SHARMA***

Purpose: Congenital cystic eye (CCE) is a rare ocular malformation. In the past, CCE was treated by surgically removing the cyst and replacing it with an ocular prosthesis. Now, sclerosing agents are the standard treatment for the cyst resolution..We would like to compare the effects of sclerosing agents (ethanolamine oleate, fibrin glue, bleomycin) on treating congenital cystic eyes.

Methods: We included 7 cases in this study from 2008 to 2023. Two cases were treated with a single injection of ethanolamine oleate, two with a single fibrin glue injection, and 3 cases with bleomycin injections.

Results: The resolution of the cyst was noted in all seven cases, but the duration of the resolution varied.

Conclusions: Conclusion: Fibrin glue and bleomycin were readily available, but fibrin glue is expensive. Ethanolamine oleate presents with few side effects. Duration of Resolution was two months, three days, and six months for ethanolamine oleate, fibrin glue, and bleomycin, respectively.

Abstract No.: 200956
Proptosis to Diagnosis: A Case of Systemic Amyloidosis Presenting as Painless Proptosis in a 75-Year-Old Male

*First Author: Jake **SEBASTIAN***
*Co-Author(s): Kristianne Chyna **DABUET**, Erika Mae **GALEOS**, Justine May **TORREGOSA***

Purpose: To report a rare case of systemic amyloidosis with an initial presentation of an orbital mass mimicking malignancy.

Methods: We present a case of a 75-year-old Filipino male with a four-year history of progressive right eye proptosis and vision loss. CT scan showed a non-enhancing soft tissue mass with calcifications encasing the right globe, raising suspicion for neoplasm. He was advised further workup at a tertiary hospital. Examination revealed a firm, immobile, non-tender orbital mass causing marked proptosis, lagophthalmos, and ophthalmoplegia. Repeat CT demonstrated an ill-defined retrobulbar mass compressing the optic nerve with internal calcifications. The initial incision biopsy showed equivocal findings of pseudoepitheliomatous hyperplasia. The patient subsequently underwent lid-sparing exenteration as a palliative treatment for possible metastatic disease and to secure a definitive diagnosis. Intraoperatively, the mass was yellowish-white, firm, and friable.

Results: Histopathology revealed fibroadipose and fibromuscular tissues extensively infiltrated by amorphous, eosinophilic, acellular material involving interstitium and vessel walls. Congo red staining confirmed amyloidosis by demonstrating characteristic apple-green birefringence under polarized light. Further systemic workup showed a partially calcified left upper lung mass, a hypodense left thyroid nodule, and irregular gastric wall thickening with calcified lymph nodes, raising concern for systemic amyloidosis or metastatic disease.

Conclusions: This case illustrates the diagnostic challenge of amyloidosis, which closely mimics

malignancy both clinically and radiographically. Definitive diagnosis relies on tissue biopsy with appropriate staining. A high index of suspicion and multidisciplinary coordination are vital, especially in elderly patients with systemic findings suggesting additional pathology.

Abstract No.: 201187
Pruning the roots: Role of preoperative ophthalmic artery embolization in Managing a Rare Case of Hypervascular Orbital Fibrous Tumor with Ophthalmomyiasis

*First Author: Hana Vienne **GECOSALA***
*Co-Author(s): Gabriel **BUNAGAN**, Kaye Dannica Ann **CABACABA***

Purpose: Solitary fibrous tumors (SFTs) are rare mesenchymal tumors of the orbit that are often highly vascularized. Their tendency to grow extensively can lead to complications such as ulceration, hemorrhage, infection, and, in rare instances, parasitic infestation. Surgical resection of large, hypervascular SFTs—particularly those extending to the orbital apex—poses significant challenges due to the increased risk of intraoperative and postoperative bleeding. This report presents a case of a large, hypervascular orbital SFT complicated by ophthalmomyiasis, managed with preoperative angioembolization to reduce surgical risks

Methods: Case report

Results: The patient underwent preoperative embolization via the ophthalmic artery using 100–300 µm and 300–500 µm embolic microspheres, delivered while a balloon catheter was inflated. The procedure was performed 48 hours before surgical excision. Angioembolization effectively reduced the tumor's vascular supply, resulting in minimal intraoperative bleeding, shorter surgical duration, and an overall easier excision. No intraoperative or postoperative complications were observed.

Conclusions: This case demonstrates the utility of preoperative angioembolization in the surgical management of large, hypervascular orbital SFTs. By significantly decreasing intraoperative bleeding and facilitating tumor removal, this approach may enhance surgical safety and outcomes in similar challenging orbital cases.

Abstract No.: 201357
Pseudoendocrine Sarcoma in the Orbit: A Case Report

*First Author: Honeylen Maryl **TEO***
*Co-Author(s): Angelo Jud **CRUZ***

Purpose: To report a rare orbital pseudoendocrine sarcoma

Methods: Case report

Results: A 56-year-old female without co-morbidities had 6 months of blurred left eye vision, bulging, and binocular diplopia. No consult was sought. Two months prior, she consulted an ophthalmologist, who requested for an orbital CT which revealed a contrast-enhancing, isodense, oval, 21x18mm lesion from the supero-medial orbit to the apex, abutting the optic nerve. She was referred for the same ophthalmic features. The family history was unremarkable for cancer. Best corrected vision was 20/20, right; 20/800 left. Left eye examination revealed relative afferent pupillary defect; hypertropia; -1 on adduction; 2.5mm relative proptosis; MRD1 3mm, MRD2 7mm; raised optic nerve. The rest was unremarkable. Orbitotomy (retrocaruncular) revealed yellow-tan to light brown, irregular, friable tissues (20x18x7mm aggregate measurement). Histopathology showed epithelioid cells with uniform, round, hyperchromatic nuclei, ample eosinophilic cytoplasm in nests/cords; low mitosis (0-3/10HPF); no ossification/atypia/necrosis. Immunohistochemistry was negative: cytokeratin (CK), CK7&20, GATA3, mammaglobin, chromograninA, synaptophysin, SMA, caldesmon, STAT6, CD34&99, calponin, EMA, HMB45, mucin4, SOX10, myogenin, p63; positive: S100, desmin, CD10. INI1 was retained. No EWSR1 gene rearrangement. Beta-catenin showed nuclear expression. The findings suggest pseudoendocrine sarcoma, a rare, intermediate-grade sarcoma of paravertebral soft tissues. A year after surgery,

the left eye vision was 20/25. The remaining eye exam was unremarkable. Long-term follow-up for this unknown phenotype is required.

Conclusions: To our knowledge, orbital pseudoendocrine sarcoma has only been reported once. We presented a detailed clinical, gross anatomical, and histopathological description of this rare orbital entity.

Abstract No.: 200218
The Quality of Life of Enucleated Patients after Provision of Prosthetic Eye: A Prospective Study in a Tertiary Hospital in the Philippines

*First Author: Jo Anne **HERNANDEZ- TAN***
*Co-Author(s): Zyrene Mary Chantal **URGEL***

Purpose: To evaluate the quality of life of enucleated patients before and after provision of prosthetic eye.

Methods: Thirteen patients who were admitted at Rizal Medical Center for enucleation were recruited for the study. All were interviewed and referred to an in-house psychiatrist for psychiatric evaluation. Only patients diagnosed with no psychiatric illness were included in the study, and informed consent was obtained. Two questionnaires were used: the Hospital Anxiety and Depression Scale(HADS-P) and the Visual Function Questionnaire(VFQ-25). These were administered at three time points: before surgery, before prosthesis (one month after surgery), and after prosthesis (two months after surgery).

Results: Based on their demographic profile, study found that most patients were married, male, employed, and had ocular trauma as the most common cause of enucleation. This finding is consistent with other studies on ocular trauma, which also report that adult males—who make up a large portion of the workforce-are most frequently affected. The HADS-P questionnaire revealed that most patients had abnormal scores before surgery, indicating heightened anxiety and depression. These scores improved before prosthesis and, after prosthesis, most patients had scores within the normal range. Similar improvements were observed in the patients' visual function across multiple domains of the VFQ-25.

Conclusions: The quality of life of enucleated patients significantly improved after receiving a prosthetic eye. Therefore, the use of prosthetic eyes plays a crucial role in enhancing the quality of life of these patients. Beyond cosmetic benefits, prosthetic eyes contribute significantly to psychological health, social integration, and mental well-being.

Pediatric Ophthalmology

Abstract No.: 200637
Comparison of Screening with LEA Symbols and Tropicamide-Phenylephrine Cycloplegic Refraction in a Community-Based Vision Screening in Children Aged 5-7 years old

*First Author: Alvina Pauline **SANTIAGO***
*Co-Author(s): Denise Patricia **GRANADA***

Purpose: This study aimed to compare the LEA Symbols Vision Screening Test with Tropicamide-Phenylephrine Cycloplegic Refraction in detecting refractive errors among children aged 5 to 7 years in a community-based setting.

Methods: The study utilized a retrospective cohort design, with a sampling frame drawn from community based vision screening records of children aged 5 to 7 years. Assessment was done using The Philippine Eye Research Institute (PERI) Vision Screening Kit and Tropicamide-Phenylephrine Cycloplegic Refraction. Data from both tests were collected and encoded. The analysis aimed to evaluate the LEA Symbols Vision Screening Test in detecting significant refractive errors, as compared to Tropicamide-Phenylephrine Cycloplegic Refraction using diagnostic performance metrics.

Results: The results for the calculations on both eyes show that the LEA symbols screening test correctly identified 76.1% of participants who failed the cycloplegic refraction. In contrast, the test correctly identified 71.8% of 190 participants who passed the cycloplegic

refraction. Among those who failed the LEA symbols screening test, 79.6% of participants failed the cycloplegic refraction, and of those who passed, 67.5% of participants passed the cycloplegic refraction. Chi-square analysis revealed a highly significant association between the LEA Symbols test results and cycloplegic refraction outcomes for both eyes ($p < 0.001$), further affirming the reliability of the LEA Symbols test as a screening tool.

Conclusions: The tests demonstrate strong potential as a primary screening tool for refractive errors in children, especially in resource-limited settings. However, it should be complemented by confirmatory testing with cycloplegic refraction for definitive diagnosis.

Abstract No.: 200760
Macular Schisis in the Pediatric Eye: Diagnostic Challenges in X-linked Retinoschisis

*First Author: Pauline **SANTIAGO***
*Co-Author(s): Jethro **KHO***

Purpose: To highlight the diagnostic challenges of X-linked retinoschisis in pediatric patients presenting with poor vision, particularly when standard clinical evaluation is limited.

Methods: Case report of 3 siblings, 2 of whom are males are presented.

Results: A 5-year-old male presented with bilateral blurred vision for one year. Family history revealed poor vision in his maternal grandfather and granduncle, suggesting an X-linked pattern of inheritance. The patient underwent comprehensive ophthalmologic evaluation. Visual acuity was 20/100 in the right eye and 20/400 in the left. Dilated fundus examination revealed macular abnormalities. Optical coherence tomography (OCT) showed foveal thickening, large intraretinal cystic spaces, and retinal layer disorganization suggestive of macular schisis. His 1-year-old brother, who presented with esotropia, was examined under anesthesia. A more advanced form of disease with schisis and retinal detachment was seen in one eye. In contrast, their 7-month-old sister had a normal ophthalmologic examination. The pattern of findings across siblings, along with the family history, supported the diagnosis of X-linked retinoschisis.

Conclusions: X-linked retinoschisis is a hereditary macular dystrophy that may be overlooked in its early stages or misdiagnosed as other retinal conditions. This case underscores the importance of obtaining a detailed family history and maintaining a high index of suspicion, especially in young children who may not tolerate a full eye examination. Early recognition is critical for preventing complications and enabling timely genetic counseling.

Abstract No.: 200987
Modified Nishida Procedure and Inferior Rectus Recession for Monocular Elevation Deficiency with Pseudoptosis

*First Author: Angela Therese **UY***
*Co-Author(s): Geraldine Clare Marie **NEGRE***

Purpose: To present a case of monocular elevation deficiency with pseudoptosis.

Methods: A five-year-old girl was referred for drooping of the left upper lid, noted at two years of age. This was accompanied by inability to elevate the left eye and a subsequent chin up head positioning. There is family history of esotropia on the maternal side. On physical examination, patient was noted to have the previously mentioned abnormal head posture. Visual acuity was 20/20 for both eyes. Extraocular motility was normal except for inability of the left eye to supraduct. There was 35 prism diopters left hypotropia and four prism diopters exotropia on both Krimsky and alternate prism cover test. Lid vitals were as follows: palpebral fissure height 9mm right, 5mm left; margin-to-reflex distance 1 (MRD) 4mm right, 1 mm left; MRD2 5mm right, 4mm left; levator function 15mm right, 9mm left. Marcus-Gunn jaw winking was not elicited. The rest of the ophthalmologic examination was normal.

Results: The patient underwent an inferior rectus recession and Modified Nishida of

the lateral rectus and medial rectus muscles. Positive forced duction test was noted on supraduction, hence the decision to perform an inferior rectus recession first. Six weeks post-operatively, exotropia of less than 10 prism diopters was noted with no vertical deviation on primary gaze and improvement of ptosis.

Conclusions: Modified Nishida is an effective option for monocular elevation deficiency. It likewise lowers the risk for anterior segment ischemia since it is a no split, no tenotomy transposition procedure, sparing the ciliary arteries.

Abstract No.: 201135
Optimizing Retinopathy of Prematurity Screening Schedule Using a Time-to-Event Model to Reduce Screening Frequency

*First Author: Ricardo **VENTURA***
*Co-Author(s): Angela Therese **UY***

Purpose: Early detection through screening is essential to prevent vision loss from severe retinopathy of prematurity (ROP). However, frequent screenings can induce physiological stress in infants and increase healthcare burden. This study aims to optimize ROP screening schedules by determining the safest and most effective timing for initial screening with the goal of reducing unnecessary eye examinations while maintaining effective Type 1 ROP detection.

Methods: A retrospective cohort study reviewed clinical records of infants with ROP screened at a tertiary Medical Center from 2013 to 2023. Demographic and clinical variables were collected. Kaplan-Meier survival analysis and Cox regression identified predictors of Type 1 ROP and estimated the time of onset. A prediction model for initial screening was developed using regression analysis, with missed-out rates evaluated to optimize sensitivity. Frequencies of examinations until treatment were also modeled, and comparisons made with conventional screening frequencies.

Results: Gestational age significantly predicted both timing and risk of Type 1 ROP ($p < .001$), with higher gestational age associated with lower risk. A prediction model was developed and revised that estimated a safe time of initial screening close to the onset of Type 1 ROP. Predicted exam frequency until treatment can be reduced in 24.5% of infants compared to standard schedules.

Conclusions: Integrating survival analysis with computational modeling enables safer individualization of ROP screening, reducing unnecessary exams and healthcare burden without compromising detection efficacy. Prospective validation and comparison with current Philippine ROP screening guidelines is recommended prior to full implementation.

Public Health, Low Vision & Genetics

Abstract No.: 200425
Beyond the Spicules: A rare case of Retinitis Pigmentosa Sine Pigmento unmasked by a novel mutation in IDH3A

*First Author: Juan Paulo **RIEGO DE DIOS***
*Co-Author(s): Manuel Benjamin **IBANEZ**, Richard Braulio **LABAO**, Miguel Enrique **ROA***

Purpose: Retinitis pigmentosa (RP) is the most commonly diagnosed inherited retinal dystrophy affecting approximately 1 in 4000 individuals worldwide. Classic findings of RP include optic nerve pallor, vessel attenuation and bony spicule like pigments especially in the periphery. However, there are also atypical forms of retinitis pigmentosa like RP sine pigmento where there is absence of its characteristic pigmentary epitheliopathy. This paper reports a case of a 32 year old male presenting as an atypical case of retinitis pigmentosa sine pigmento, first-ever recorded with compound heterozygous mutations in IDH3A, a gene that has only been reported in 4 other cases of typical RP to date.

Methods: A patient from a non-consanguineous Filipino family was clinically diagnosed with RP at the Ocular Genetics clinic. Complete ophthalmic examination was done, as well as diagnostics (fundus photo, fundus autofluorescence, ocular coherence tomography of the macula, full

field electroretinography, visual field test). In addition, an inherited retinal dystrophy panel of 330 was requested.

Results: Fundus findings of our patient revealed midperipheral degeneration, vessel attenuation, with absence of bony spicules. Genetic testing revealed the patient to be compound heterozygous for two variants IDH3A c.27+2T>G, and IDH3A c.415G>T (p.Asp139Tyr).

Conclusions: In summary, we report a rare case of a patient presenting with RP sine pigmento and harboring novel IDH3A mutations, expanding the genetic spectrum of IDH3A variants associated with RP. There are only 4 reported cases of IDH3A-related typical RP and none presenting as sine pigmento like our patient.

Abstract No.: 200728
From Eyelid to Exons: a Genetically Confirmed Case of Muir-Torre Syndrome with a Novel MSH2 Deletion.

*First Author: Steven Matthew **LEE***
*Co-Author(s): Manuel Benjamin **IBAÑEZ IV**, Oliver **LISTANO**, Maria Donna **SANTIAGO***

Purpose: Eyelid sebaceous neoplasms are rare and often regarded as benign, but they may represent the first sign of an underlying hereditary syndrome. Muir-Torre Syndrome (MTS), a Lynch Syndrome variant, is characterized by the presence of at least one cutaneous sebaceous neoplasm and one visceral malignancy. Reported cases are limited to Caucasians, often associated with DNA mismatch repair (MMR) gene mutations. MTS is very rare with only ~200-250 cases reported globally and none previously documented in the Philippines. We report a case of MTS confirmed through histopathology, immunohistochemistry, and genetic testing.

Methods: A patient from a non-consanguineous Filipino family presented with a rapidly growing right upper eyelid mass. Surgical excision revealed a well-circumscribed neoplasm with histological features consistent with a sebaceous lesion. The patient also had a notable history of duodenal carcinoma, raising suspicion for MTS.

Results: Immunohistochemistry demonstrated MSH2 and MSH6 deficiency. Multigene panel analysis revealed a large deletion of exon 7-8 in the MSH2 gene. This copy number variant is pathogenic and has never been reported in individuals with MTS.

Conclusions: This highlights the importance of thorough evaluation when cutaneous lesions accompany internal malignancy. It underscores the ophthalmologist's role in recognizing lesions as potential markers of systemic disease. Genetic testing was crucial in establishing diagnosis and guiding long-term surveillance. To our knowledge, this is the first reported case of MTS involving an MSH2 exon 7-8 deletion. Reporting such enhances global understanding of MTS and contributes to the growing body of evidence linking novel gene variants to rare syndromes.

Abstract No.: 200464
Light Box as Visual Stimulation and Potential Learning Medium for a Toddler Age 1 with Category 4 Visual Impairment due to Anterior Segment Dysgenesis Both Eyes, S/P Vitrectomy with Cyclophotocoagulation, Lensectomy, Implantation of Glaucoma Drainage Device, Left Eye.

*First Author: Ann Jelynne **MARFORI***

Purpose: This case demonstrated the use of a light box for visual stimulation and learning based on the visual acuity measurements and computation for magnification needs.

Methods: For the visual acuity testing, optokinetic stripes were employed using the principle of preferential looking. The result was used to approximate acuity in Snellen feet and subsequently compute for the magnification requirement. For the light box, a LED-lighted pad was used measuring 21.0X29.7 cm (A4) to 29.7X42.0 cm (A3). Cutout figures of dark colored materials were placed on its surface giving high contrast, properly sized images for the child to sense.

Results: The subject did not react to light on the right eye. On the left, using optokinetic stripes and observing at a distance of 55-60 cm, the patient walked towards and reached for the largest stripes. The bar size had a width of 2.6 cm, 1.9 cycles/sec, 0.20 cycles/degree. This approximated to a visual acuity of 20/3200 Snellen feet equivalent. Based on the method of reciprocal of vision, the magnification requirement was computed at 64 diopters or 16X. Given the above data, around 9 cm sized figures were recommended with a working distance of about 20 cm.

Conclusions: In a toddler with near-total vision loss, it was helpful to determine the visual acuity in order to compute the magnification requirement to be able to try possible low vision aids, such as a light box. The said measurements can also be used as a guide for further management and treatment options.

Abstract No.: 201160
More than meets the eye: a case report on a patient with caruncular mass and Goltz syndrome

*First Author: Manuel Benjamin **IBAÑEZ IV***
*Co-Author(s): Johnny Hill **SALAYSAY**, Yvette Marie **SANTIAGO-GATMAITAN***

Purpose: To present a case of a 26 year old who came in due to a few months history of a caruncular mass at the left eye with other systemic findings.

Methods: This is a diagnostic case report.

Results: This is a case of a 26 year old female, who presented with a caruncular mass at the left eye associated with tearing. On further history taking, the patient was identified to be a known case of Goltz syndrome. Physical examination showed the caruncular mass at the left eye, with an additional finding of microphthalmia and coloboma of the iris and the retina of both eyes. The patient was then referred to other services, in particular Dermatology, for evaluation and co-management. The patient eventually underwent excision of the caruncular mass under local anesthesia. The specimen was sent to Pathology and was diagnosed as a case of squamous papilloma.

Conclusions: Goltz syndrome or Focal Dermal Hypoplasia is a rare disease caused by a mutation of the PORCN (porcupine O-acyltransferase) gene. It affects many organs in the body: the skin, eyes, teeth, mouth, cardiovascular, gastrointestinal, urinary, skeletal, and central nervous system. The patient's chief complaint of a caruncular mass led us to identifying the rare disease. Therefore, it is important to not only look at the ocular findings, but to also ask for other symptoms to better help a patient.

Abstract No.: 201305
Multimodal Imaging Reveals relationship between Choroidal Artery and Diverse Lesions of Pathologic Myopia

*First Author: Yao **LIANG***
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Purpose: Using indocyanine green angiography (ICGA) and swept-source optical coherence tomography angiography (SS-OCTA) co-registration to analyze the relationship between choroidal arteries and different kind of fundus lesions in pathologic myopia (PM).

Methods: This retrospective study enrolled 111 pathologic myopia eyes. Through co-registered ICGA and SS-OCTA images mapped entry points of short posterior ciliary arteries (SPCA) through the choroidoscleral interface (CSI). Anatomic relationships between large choroidal artery entries and lesions-including choroidal neovascularization (CNV), multifocal choroiditis (MFC), and lacquer cracks with subretinal hemorrhages-were evaluated.

Results: 111 PM eyes were categorized into four groups: PM-CNV (n=65), MFC (n=22), MFC with CNV (n=13), and lacquer cracks with hemorrhage (n=11). Choroidal artery entries were observed at 70.5% of CNV lesions in the PM-CNV group. No artery entries were detected at inflammatory foci in either MFC or MFC-CNV groups; however, 62.5% of CNV lesions in the MFC-CNV group exhibited artery

entries. And in hemorrhages groups, 50% showed choroidal artery entries.

Conclusions: Choroidal atrophy in PM triggers hemodynamic remodeling where large arteries even SPCA become compensatory nutrient vessels while simultaneously serving as pathologic sources for CNV and hemorrhage. Dual role of these anatomic remodeling should be consider through treatment course.

Abstract No.: 201376
PERIOPERATIVE CARE PRACTICES AND ANTIBIOTIC PROPHYLAXIS IN CATARACT SURGERY AMONG OPHTHALMOLOGISTS IN NORTHWESTERN LUZON

*First Author: George Michael **SOSUAN***
*Co-Author(s): Abigail **MONTES**, Sharlene **NOGUERA***

Purpose: The main objective of this study was to determine the perioperative care practices and antibiotic prophylaxis in cataract surgery among ophthalmologists practicing in Northwestern Luzon, Philippines.

Methods: A cross – sectional web-based online survey was conducted among 31 ophthalmologist in Northwestern Luzon using a modified and validated questionnaire adapted from Asian study on Peri-operative Antibiotic Prophylaxis (APAX) Survey form. Responses were analyzed to assess routine use of lid scrubs, lid drapes, povidone iodine, and antibiotic prophylaxis in terms of route, timing, frequency and type of prophylactic care measures used in preoperative, intraoperative and postoperative phases among cataract surgery patients.

Results: Routine lid scrubs and the use of povidone iodine for preoperative antiseptic preparation of the eye were consistently used in both low risk and high risk cases. Preoperative use of antibiotic was selective: 29% used them in low risk cases and increasingly high to 48.4% for those who are higher risk cases. Intraoperative antibiotic use were routinely used by 90.3% in both low risk and high risk patients, with intracameral route as their preferred route. Postoperatively, all respondents prescribed topical antibiotics, with higher dosing frequencies (one drop 8 times a day) and longer durations of four weeks in high risk patients

Conclusions: The study reveals a strong consensus on antiseptic use and preparation, but significant variability in antibiotic prophylaxis, timing, dosing frequency and duration, particularly in preoperative and postoperative care. These findings highlights the need for locally adapted, evidence-based guidelines and standardized care while promoting antibiotic stewardship.

Abstract No.: 201044
Presence of single null allele mutations in EYS-related retinitis pigmentosa may be associated with early onset disease in Filipinos: a case series

*First Author: Manuel Benjamin **IBAÑEZ***
*Co-Author(s): Richard Braulio **LABAO**, Tamilyn Chelsea **LADDARAN**, Marianne Grace **NAVARRETE**, Miguel Enrique **ROA***

Purpose: Retinitis pigmentosa (RP), represents the primary cause of hereditary blindness in adults, affecting an estimated 1 in 4,000 persons worldwide. The eyes shut homolog (EYS) in particular, has been identified as the major gene for non-syndromic autosomal recessive RP, a severe form of autosomal recessive RP. Age of onset of eyes shut homolog-related retinitis pigmentosa (EYS-RP) is variable ranging from 13 to 50 years old. Generally, the presence of two null alleles in EYS produce a more severe phenotype with a faster visual decline compared to those with only one null allele. In this case series, we aim to describe Filipino patients with at least one frameshift mutation, and presenting with severe, early onset RP.

Methods: This is a retrospective case series of 6 patients from unrelated families seen by the ocular geneticist of a tertiary medical center in the Philippines. Chart review was done of RP patients with genetic confirmation of EYS. Data included demographics, clinical history, age of onset, best corrected visual acuity (BCVA), diagnostics, and genetic test results.

Results: Six Filipino patients were diagnosed with EYS-RP. Five were females and one was male. The most common initial symptom was night blindness while age of onset ranged from 5-26 years old. All patients harbored at least one null allele mutation of the EYS gene.

Conclusions: Our case series show that the presence of at least one truncating mutation of EYS, regardless of heterozygosity, can produce an early and severe onset phenotype of RP.

Abstract No.: 200122
Research Agenda Setting at the Eye Department with the Guidance of the National Institutes of Health - Department of Clinical Epidemiology

*First Author: John Mark **DE LEON***

Purpose: It is imperative for the Eye Department to have a relevant and timely research agenda. This can guide trainees and consultants in the preparation, conduct, and eventual publication of research. This presentation will describe the research agenda setting process with the guidance of the National Institute of Health (NIH) - Department of Clinical Epidemiology.

Methods: A research agenda technical working group (TWG) was organized to spearhead the research agenda setting, in collaboration and guidance of the eye departments's leadership. The TWG drafted a contextual map that served as an overarching framework where the defined research output was guided by important influencers and existing guidelines. The TWG divided the influencers as either internal or external. Internal stakeholders included the Eye Department's ophthalmology subspecialties. External stakeholders included relevant government institutions and local/ international entities/organizations. Research topics were obtained from all these internal and external stakeholders. The TWG collated all the received topics and they were reviewed and summarized/consolidated.

Results: The TWG tallied 85 unique research topics from both the internal and external stakeholders. These were subjected to ranking prior to an en banc session that involved the presence of all the relevant stakeholders. The entire Eye Department was invited in the en banc session for feedback and comments before the final agenda was drafted. An infographic was created to guide the Eye Department's consultants and fellows in initiating research.

Conclusions: Our Eye Department's research agenda had been crafted for 2024-2027, with the guidance of the NIH Department Of Clinical Epidemiology.

Abstract No.: 200282
SCARRED FOR LIFE: The Need for Rural Awareness in Pediatric Ocular Steven-Johnsons-Syndrome

*First Author: Elizabeth Aileen **GILLER***
*Co-Author(s): Berna Edess **LIM***

Purpose: To emphasize the importance of early recognition of ocular Stevens-Johnson Syndrome (SJS), a rare but serious hypersensitivity reaction that can lead to significant irreversible ocular surface conditions affecting the patient's quality of life. In children, it may overlap with viral exanthems like varicella making early diagnosis difficult especially in rural settings.

Methods: We describe a case of a 5-year-old female from a rural area who developed chronic ocular symptoms following febrile episodes and generalized vesicular rash initially treated as varicella- zoster. Despite persistent redness, tearing, photophobia, and gradual visual decline over 7 months she was being repeatedly treated as conjunctivitis with only topical antibiotics and lubricants over months.

Results: Upon consultation at our clinic for second opinion for non-resolving eye symptoms. Examination revealed right eye visual acuity of 10/400, symblepharon, tylosis, corneal pannus, and scarring involving the visual axis. The left eye had tylosis, symblepharon and inferior pannus with preserved vision of 20/32. These findings were consistent with chronic ocular SJS with bilateral Limbal Stem Cell Deficiency (LSCD).

Conclusions: SJS in children may resemble or overlap with common viral illnesses, causing delays in diagnosis. Ocular signs may be subtle and misattributed to conjunctivitis. Without timely ophthalmologic referral and aggressive proper management, irreversible damage and risk for amblyopia may occur. In pediatric cases with persistent ocular symptoms post-febrile illness associated with exanthems, especially in rural settings, clinicians must consider SJS. Early recognition and referral to an ophthalmologist are crucial to prevent long-term visual impairment.

Abstract No.: 200278
Strengthening Ophthalmic Workforce Capacity in Asia: A Regional Training Model Through the EYETRAIN Initiative

*First Author: Ian **YEO***

Purpose: The EYETRAIN initiative was developed to address the critical shortage of trained Allied Ophthalmic Personnel (AOPs) in Asia. The programme aims to establish sustainable capacity-building models using blended learning and digital platforms.

Methods: EYETRAIN was piloted in selected institutions across Vietnam and Indonesia in 2023, focusing on training ophthalmic nurses and mid-level allied ophthalmic personnel (AOPs). The training employed a blended learning approach, which included asynchronous online learning modules, onsite skill-based workshops, and structured Train-the-Trainer sessions. The curriculum was aligned with international core competencies, and local faculty members, who played a crucial role in delivering the program, were trained to ensure the sustainability of the initiative. Monitoring and evaluation tools were incorporated to assess knowledge acquisition, practical competencies, and the program's scalability.

Results: In its pilot phase, EYETRAIN trained 68 AOPs across two sites. Post-training assessments showed an average knowledge score improvement of 43%. Over 90% of participants demonstrated proficiency in core clinical skills. Local faculty were certified as trainers to ensure sustainability. Plans are to expand to three additional countries—Malaysia, the Philippines, and Thailand—within the next 12-24 months.

Conclusions: EYETRAIN offers a replicable model for regional ophthalmic workforce development. The programme addresses existing training gaps by leveraging digital platforms, international partnerships, and localised implementation. These partnerships are crucial in promoting self-sustaining education ecosystems. This initiative provides a strategic pathway to support the goals of universal eye health coverage in Asia and may serve as a model for broader health workforce development, connecting professionals and organisations in a global effort.

Abstract No.: 200685
Utilizing Google Search Data as a Public Health Surveillance Tool for Ophthalmic Symptoms Related to COVID-19: An Infodemiology Study in the Philippines

*First Author: Carlo **ARTIAGA***
*Co-Author(s): Fernandino Jose **FONTANILLA**, David Marco **MAGPANTAY**, Al Joseph **MOLINA***

Purpose: The COVID-19 pandemic limited traditional disease surveillance in the Philippines while community quarantines likely increased conditions like digital eye strain. This study explored Google Trends™ to characterize online search interest for ophthalmic symptoms—potentially driven by both factors—and to assess its correlation with confirmed COVID-19 cases.

Methods: We conducted a time-series analysis of Google Trends data (2017-2021) for 173 search terms for 22 ophthalmic symptoms. We identified significant search surges and then used linear regression and time-lag analysis to correlate them with reported weekly COVID-19 cases.

Results: Statistically significant search surges occurred for nine ophthalmic symptoms. Highly significant surges ($p \leq 0.001$) were seen for conjunctivitis, headache, eye pain, eye strain,

blurred vision, and itchy eyes. Other symptoms, including tearing (p=0.042), sore eyes (p=0.043), and photophobia (p=0.045), were also significant. Notably, "conjunctivitis" search volumes had a strong positive correlation (r>0.60) with weekly COVID-19 cases, peaking up to three weeks before reported surges and suggesting its potential as an early indicator.

Conclusions: The surge in online searches for ophthalmic symptoms likely reflects conditions underreported during the pandemic, such as digital eye strain and ocular manifestations of COVID-19. The strong correlation for "conjunctivitis," which preceded reported case surges, shows the value of infodemiology. This methodology offers a low-cost, real-time framework to supplement traditional surveillance, enhancing preparedness for future epidemics where early detection is critical.

POSTER

APVRS

Intraocular Inflammation, Uveitis & Scleritis

Abstract No.: 200216
Panel No.: APVRS-009
A Case Report on Sympathetic Ophthalmia in a Delayed Repair of a Ruptured Globe Following Blunt Ocular Trauma
*First Author: Martin **DIONSON***
*Co-Author(s): Lyll Karen **ARRIOLA**, Lorenz Robert **ONG***

Purpose: This is a case of a 63-year-old male who developed sympathetic ophthalmia of his left eye six weeks following an open globe injury to his right eye, after refusing surgical repair.

Methods: A case report was done.

Results: We report a case of a 63-year-old male who developed blurred vision and glare in his left eye six weeks after an open globe injury to his right eye, after refusing surgical repair. Visual acuity documented at symptom onset was 20/200 in the left eye, with findings indicative of sympathetic ophthalmia, including granulomatous anterior uveitis, vitritis, and areas of serous retinal detachment. The patient underwent surgical repair of the injured eye, resulting in slight improvement in vision. He was started on oral prednisone (1 mg/kg/day), leading to symptom improvement within a week of initiating therapy, with the beginning resolution of the serous retinal detachment three days after treatment initiation and subsequent improvement in follow-up visits, resulting in final visual acuity of 20/30 in the left eye.

Conclusions: Sympathetic ophthalmia is a rare condition that should be considered in all cases of ocular trauma and ocular surgery. Diagnosis of the condition is mainly clinical. There has been a shift in the surgical management of the inciting eye, with current literature favoring salvage over removal. Medical management is the mainstay of treatment for this condition, and prompt initiation dramatically improves visual outcomes in most patients, highlighting the need for timely recognition.

Abstract No.: 201351
Panel No.: APVRS-001
Association of the Clinical Profile and Prevalence of Human Immunodeficiency Virus (HIV)–Associated Ophthalmic Diseases in a Philippine Referral Eye Center
*First Author: Minerva **PARIS***

Purpose: The primary objective was to evaluate the association between ocular manifestations and the demographic and clinical characteristics of HIV-positive patients at a Philippine tertiary eye center (2019–2023). Specific aims included describing the patient population, identifying common ocular conditions, and analyzing related risk factors.

Methods: A retrospective, cross-sectional study was conducted by reviewing the records of 143 HIV-positive patients at the DOH Eye Center – East Avenue Medical Center from January 2019 to December 2023. Data collected included demographics, World Health Organization (WHO) clinical stage, CD4+ T-cell counts, and ophthalmologic findings. Statistical analyses used included chi-square tests, Mann–Whitney U tests, and binary logistic regression.

Results: Of the 143 patients (median age: 33; 97.2% male), 60.14% had at least one ocular condition. HIV retinopathy (39.16%), and cytomegalovirus retinitis (19.58%) were the most common. A significant association was found between ocular disease and advanced immunosuppression. Patients in WHO clinical stage 4 were over 14 times more likely to have ocular manifestations than those in stage 1 (odds ratio [OR] = 14.62, P = 0.001). Lower CD4+ counts were also linked to higher disease prevalence.

Conclusions: HIV-associated ocular manifestations are highly prevalent in this Filipino cohort, particularly among patients with advanced HIV/acquired immunodeficiency syndrome (AIDS). These findings underscore the critical need for routine ophthalmologic screening as a standard component of comprehensive HIV care in the Philippines to enable early detection and prevent irreversible vision loss.

Abstract No.: 200550
Panel No.: APVRS-008
Atypical Lesion Pattern in a Case of Punctate Inner Choroiditis (PIC)

*First Author: Albert John **BROMEO***
*Co-Author(s): Chynna Pearl Tana **BACCAY***

Purpose: PIC is a rare idiopathic inflammatory posterior uveitis presenting with classic yellow-white lesions confined to the posterior pole in the absence of anterior segment and vitreous inflammation. Choroidal neovascularization (CNV) is a known complication and a major cause of visual impairment. We report a rare case of PIC presenting with an atypical lesion pattern.

Methods: A case report.

Results: A 61-year-old male presented with blurring of vision in both eyes. Best-corrected visual acuity on presentation was 20/40 on the right eye and 20/50 on the left. Fundus examination showed multiple yellow-white dots right along the superior and inferior arcade in both eyes, along with subretinal hemorrhage in the left eye. Fluorescein angiography showed early hypofluorescence and late hyperfluorescence of the dot lesions as well as hyperfluoresence from CNV in both eyes. Optical coherence tomography (OCT) revealed CNV with pigment epithelium detachment and focal areas of retinal pigment epithelium loss in both eyes. Fundus autofluorescence (FAF) showed mixed areas of hypo- and hyperautofluoresence of the lesions. Systemic work-up was unremarkable. He was diagnosed with PIC with secondary CNV in both eyes. The patient was treated with a course of oral prednisone as well as started on methotrexate, along with a series of intravitreal bevacizumab injections in both eyes. Management led to lesion stability as demonstrated by FAF as well as CNV inactivity on OCT.

Conclusions: PIC may present with atypical features. Recognition is essential for timely diagnosis and initiation of appropriate therapy to prevent permanent visual impairment.

Abstract No.: 200671
Panel No.: APVRS-002
Clinical Features, Systemic Associations, and Management of Pediatric Uveitis in North Indian Cohort

*First Author: Narendra **BAGRI***
*Co-Author(s): Rohan **CHAWLA**, Nawazish **SHAIKH**, Pradeep **VENKATESH***

Purpose: To describe the clinical features, systemic associations, and management options of pediatric uveitis at a tertiary care center in Northern India.

Methods: In this observational study, all pediatric patients (age <16 years) presenting or being followed up in the conjoint clinic of a tertiary eye care hospital were recruited from January 2024 to December 2024. These patients either presented with complaints of uveitis or were referred by a pediatric rheumatologist to rule out uveitis. Data collected included age of onset of uveitis, anatomic location of uveitis, clinical features, systemic associations, complications, and their subsequent management, including topical and systemic therapy.

Results: A total of 93 children ranging from 3 to 16 years were recruited. No gender predilection was noted. Amongst these 93 children, unilateral uveitis was seen in 16 (17.2%), bilateral uveitis in 53 (57%), and no uveitis was seen in 24 children (25.8%). The mean age of the cohort was 9.4 years. The most common clinical presentation was anterior uveitis. The most common systemic association was juvenile rheumatoid arthritis, seen in 20 patients, all of whom presented with anterior uveitis. Idiopathic uveitis was

seen in 36 patients. Management was using immunomodulatory therapy in 57 patients, of whom 50 were treated with methotrexate. Additionally, 32 patients required biological therapy with adalimumab. Uveitis-related blindness was seen in 8.6% of the cohort.

Conclusions: Anterior uveitis is the most common form of uveitis in children with systemic manifestations seen in 35% of our cohort. Multidisciplinary care in the form of conjoint clinics are recommended.

Abstract No.: 201227
Panel No.: APVRS-005
Multifocal Choroidopathy in Asians: Subtypes Distribution, Recurrence Factors, and Treatment Approaches

*First Author: Yun-chi **CHIANG***
*Co-Author(s): Yi-hsing linda **CHEN**, Yih-shiou **HWANG**, Wei-chi **WU***

Purpose: Multifocal choroidopathy is a heterogeneous disease composed of punctate inner choroidopathy (PIC), multiple evanescent white dot syndrome (MEWDS), serpiginous choroiditis (SC), acute zonal occult outer retinopathy (AZOOR), multifocal choroiditis and panuveitis (MCP), acute posterior multifocal placoid pigment epitheliopathy (APMPPE), ampiginous and birdshot retinochoroiditis. Our study investigated the epidemiology, treatment responses, and risk factors for recurrence in a Taiwanese cohort.

Methods: This was a multicenter retrospective cohort study, including 138 patients (185 eyes) diagnosed between 2009 and 2024. The Student's t-test and Mann–Whitney U test were utilized for comparing continuous variables between recurrence and nonrecurrence groups. The presence of recurrence was analyzed with Cox regression.

Results: The mean age of onset was 39.7± 13.8 years. The most prevalent subtypes were PIC/MCP (n = 88, 47.6%), followed by MEWDS (n = 45, 24.3%). Myopia was highly prevalent, particularly in PIC/MCP (93.2%, $P < 0.001$). Both periocular triamcinolone acetonide (PTSK) ($P = 0.010$) and immunosuppressive therapies (IMT) ($P < 0.001$) were most frequently administered in the ampiginous choroiditis/APMPPE group. In contrast, anti–vascular endothelial growth factor injections were most commonly given in PIC/MCP (50.8%) and SC patients (45.5%, $P < 0.001$). Recurrence was reported in 26.5% (n = 49) eyes. Systemic disease (hazard ratio [HR] 1.96, $P = 0.041$), use of PTSK (HR 3.40, $P < 0.001$), and initial use of IMT (HR 1.73, $P = 0.036$), indicating a more severe presentation as risk factors for recurrences.

Conclusions: Given the risk of permanent visual impairment in severe multifocal choroidopathy subtypes, tailored treatment plan and long-term disease surveillance were in need.

Abstract No.: 200313
Panel No.: APVRS-010
Ophthalmia Nodosa Type 4: Clinical Course and Management With Topical Steroids in a Filipino Male

*First Author: Richmond **SIAZON***
*Co-Author(s): Lorenz Jacob **MANGAHAS***

Purpose: To describe the clinical course of ophthalmia nodosa type 4 in a 25-year-old male, managed conservatively with topical anti-inflammatory drugs.

Methods: Case Report.

Results: This is a case of a 25-year-old Filipino male presenting with anterior chamber setae causing iritis, managed conservatively with topical steroids and followed closely for several months. He presented with redness of the right eye after being hit by a caterpillar directly in the eye while riding a motorcycle. Examination revealed numerous setae on the bulbar conjunctiva, corneal stroma, and anterior chamber, causing iritis. Anterior segment optical coherence tomography (ASOCT) is useful for localizing and determining the depth of the setae. Serial manual removal of the setae along the ocular surface and topical corticosteroid treatment were performed. After several months, vision improved to 20/20, and the eye redness resolved. Medical management with long-term follow-up may be a treatment option for setae located in the

anterior chamber. Early removal of accessible setae must be performed as a precautionary measure to prevent intraocular migration.

Conclusions: The study highlights the importance of prompt diagnosis and treatment in managing ophthalmia nodosa. Delayed management can lead to severe inflammation, prompting more invasive treatment, and may sometimes result in vision loss. Early intervention with steroids and anti-inflammatory medications, along with the advanced types of ophthalmia nodosa, usually warrants a combination of treatments, which is crucial in preventing long-term damage to the eye.

Abstract No.: 200674
Panel No.: APVRS-003
Optic Nerve Head (ONH) Edema Unmasking Neurosyphilis: A Diagnostic Challenge in Ocular Syphilis

*First Author: Cristina **GARCIA***
*Co-Author(s): Adrian Carl **SANTOS***

Purpose: ONH edema is an uncommon manifestation of syphilis and is particularly challenging to differentiate from other etiologies of ONH swelling. This case report presents a 28-year-old male diagnosed with bilateral ocular syphilis with ONH edema.

Methods: The patient had had a two-month history of right eyelid swelling, pain, redness, whitish discharge, and blurring of vision for both eyes. He was seen by a uveitis specialist, where he was diagnosed and managed as a case of bilateral ocular syphilis. A referral to an infectious disease specialist was done, and a diagnosis of neurosyphilis was considered. Hence, the patient was admitted for further diagnostics and treatment.

Results: During admission, optical coherence tomography (OCT) and fluorescein angiography (FA) were done and showed optic disc edema with retinal thickening, consistent with FA findings, in both eyes. Lumbar tap confirmed the diagnosis of neurosyphilis. Additionally, the patient tested positive for human immunodeficiency virus (HIV). The patient was treated with intravitral aqueous penicillin G for 14 days, azithromycin 1000 mg weekly, cotrimoxazole 800/160 mg daily, prednisone 30 mg for two weeks, and prednisolone eye drops four times daily. The patient was eventually discharged with improved vision, inflammation, and disc swelling and was continued to be monitored on an outpatient basis.

Conclusions: The case emphasizes the important role of ophthalmic screening and timely treatment for neurosyphilis. Ophthalmologists play a major role in diagnosing these cases with thorough history and careful clinical examination. A multidisciplinary approach to these cases is also crucial for better outcomes for the patients.

Abstract No.: 200145
Panel No.: APVRS-007
Pars Plana Vitrectomy (PPV) in Behcet's Disease With Persistent Panuveitis and Tractional Retinal Detachment

*First Author: Cristina **GARCIA***
*Co-Author(s): Maria Christine **DY***

Purpose: To report a case of steroid-dependent Behcet's disease managed with PPV for nonresolving vitritis with tractional retinal detachment.

Methods: A 32-year-old Filipino male clinically diagnosed with Behcet's disease presented with chronic bilateral blurring of vision. The patient has been on long-term immunotherapy with azathioprine and high-dose oral prednisone. The right eye is pseudophakic with functional vision post–intravitreal steroid implant injection. The left eye, however, had developed traction retinal detachment from persistent vitritis with only light perception. Due to the structural complications and inability to taper off systemic medications, PPV was advised.

Results: Combined phacoemulsification with posterior chamber intraocular lens implantation and standard three-port PPV was done. Following the clearing of vitritis, preretinal fibrovascular membranes were removed by delamination and segmentation. Circumferential endolaser photocoagulation was completed with silicone oil endotamponade. Intravitreal

bevacizumab was injected prior to concluding the surgery. The patient had an uneventful postoperative recovery. Vision and intraocular pressure remained stable. Despite significant retinal ischemia, the retina was attached.

Conclusions: Behcet's is a multisystemic, immune-mediated disease with chronic, relapsing panuveitis. In spite of aggressive medical therapy, structural sequelae can include retinal detachment. Pathology is complex, involving retinal neovascularization due to ischemia and subsequent fibrovascular membrane formation, which leads to retinal traction and detachment. Based on studies, therapeutic vitrectomy proved to be safe and effective with favorable functional and anatomical success. Regardless of visual outcome, surgery can help decrease inflammatory episodes and minimize the medical burden in these patients.

Abstract No.: 200745
Panel No.: APVRS-004
Retinal Vasoproliferative Tumor (RVPT) Masquerading as Ocular Tuberculosis (TB) in a Young Filipino Female: A Diagnostic Challenge

*First Author: Sharmaine Anjanette **NG***
*Co-Author(s): Juan **LOPEZ**, Githea Philline **MARTINEZ***

Purpose: To describe the ophthalmologic findings and management in a rare case of RVPT initially misdiagnosed as tubercular posterior uveitis (TPU) in a healthy young Filipino female.

Methods: A 24-year-old Filipino female with no known comorbidities presented with a two-month history of gradual, painless, blurring of vision of the right eye. She had no history of prior TB infection, TB exposure, or constitutional symptoms. Corrected-distance visual acuity (CDVA) was counting fingers at three feet. Examination of the right eye revealed normal intraocular pressure with mild vitritis. Fundoscopy showed a 10-disc diameter yellow-pink elevated lesion at the inferotemporal periphery surrounded by extensive exudation, intraretinal hemorrhages, and dilated vascular arcades. A large exudative retinal detachment from 4 to 9 o'clock with macular involvement was noted. Macular optical coherence tomography revealed a hyperreflective multilobulated intraretinal mass with heterogeneous internal reflectivity and marked posterior shadowing. Initial diagnosis was TPU given a positive Mantoux tuberculin skin test (26 mm induration), and anti-Koch therapy was started.

Results: After one month of treatment, there was no clinical improvement. Idiopathic RVPT was reconsidered. Anti-Koch therapy was discontinued, and monthly intravitreal anti–vascular endothelial growth factor injections were initiated. After five doses, there was regression of the lesion and resolution of the exudative detachment. CDVA improved to 20/40.

Conclusions: This case highlights how RVPT can masquerade ocular TB, particularly in endemic areas such as the Philippines. Early recognition through multimodal imaging and timely intervention can improve visual outcomes.

Abstract No.: 201379
Panel No.: APVRS-006
Seeing the Signs: Disseminated Tuberculosis Presenting as Scleral and Iris Granulomatous Nodules: A Case Report

*First Author: Mary Ellaine **DIAZ***
*Co-Author(s): Aera Veenice **BRIOSO***

Purpose: Ocular tuberculosis has varying clinical manifestations; however, careful assessment allows a small preview of a more severe, life-threatening disseminated disease.

Methods: This was a case of a 50-year-old housewife who presented with a perilimbal granulomatous conjunctival nodule that seemed to invade the anterior chamber of the right eye, associated with granulomatous uveitis with a rapid increase in the number of iris granulomas. She had multiple neck, axillary and preauricular masses that had unremarkable biopsy findings previously. Clinical impression was multiple extrapulmonary tuberculosis. Anterior segment ocular coherence tomography showed

hyperechoic thickening of the sclera extending to the limbus and a hypoechoic lesion in the anterior chamber angle. Repeat biopsy of the neck mass identified acid-fast bacilli. During her admission, she exhibited progressive weakness, increased respiratory effort, and abdominal distension. Unfortunately, her condition deteriorated rapidly, leading to her demise.

Results: Disseminated tuberculosis poses a life threatening condition which harbors a mortality rate of 34.9% which is 3.39 to 4.53 times greater than non disseminated types. Spread from a primary site can be lymphatic or hematogenous. Extrapulmonary tuberculosis and other disseminated types are typically diagnosed late but initiation of treatment at the first catch of signs is crucial in the prevention and can decrease further dissemination and complications by 65%.

Conclusions: Disseminated tuberculosis is an important cause of morbidity and mortality, particularly in the Philippines where it is endemic. This case emphasized that prompt holistic evaluation is important to prevent complications and untimely death.

Ocular Imaging

Abstract No.: 200441
Panel No.: APVRS-014
Comparison of Macular Ganglion Cell Layer (mGCL) and Peripapillary Retinal Nerve Fiber Layer (pRNFL) Thickness Analysis Using Cirrus Optical Coherence Tomography (OCT) in Normal, Glaucoma Suspects, and Glaucoma Patients Seen at a Tertiary Hospital in the Philippines: A Cross-Sectional Study

First Author: Irene ***FELARCA***
Co-Author(s): Maria Imelda ***VELOSO****, Ruth Lyra* ***YAP***

Purpose: To compare the diagnostic capability of mGCL thickness and pRNFL thickness, measured by OCT, in differentiating normal eyes, glaucoma suspects, and early, moderate, and severe glaucomatous eyes.

Methods: A prospective cross-sectional study was conducted involving adult subjects divided into normal, glaucoma suspect, and early, moderate, and severe glaucoma groups. The mean thickness values for mGCL and pRNFL were measured using Cirrus High-Definition Optical Coherence Tomography (HD-OCT). Area under the receiver operating characteristic curve (AUC), sensitivity, and specificity were calculated to determine diagnostic accuracy.

Results: Both mGCL and pRNFL thickness progressively decreased from normal to suspect to early, moderate, and severe glaucomatous eyes. For distinguishing normal from early glaucoma, mGCL achieved an AUC of 0.74 with sensitivity of 66.7% and specificity of 82.6%, while pRNFL showed an AUC of 0.72, sensitivity of 48.2%, and specificity of 91.3%. Differences in AUCs were not statistically significant across all groups. Sectoral thinning in the superotemporal and inferotemporal macula was noted early in disease progression.

Conclusions: mGCL thickness analysis may provide complementary value to pRNFL measurement in detecting early glaucomatous changes. Combined evaluation can enhance structural assessment, supporting earlier diagnosis and timely management of glaucoma.

Abstract No.: 200133
Panel No.: APVRS-013
Evaluation of Peripheral Retinal Degenerations Using Ultra-Widefield (UWF) Swept-Source Optical Coherence Tomography (SSOCT)

First Author: Rajpal ***VOHRA***
Co-Author(s): Ayushi ***AGARWAL****, Rohan* ***CHAWLA****, Vinod* ***KUMAR***

Purpose: To describe the features of peripheral retinal degenerations using an UWF SSOCT.

Methods: In this cross-sectional study conducted at a tertiary eye care center in Northern India, peripheral retinal degenerations, such as lattices, snail track lesions, paving stone, white without pressure (WWOP), microcystoid lesions, retinoschisis, and other suspicious lesions, were identified

with clinical examination. Following clinical examination, these eyes underwent UWF OCT.

Results: One hundred eyes with 14 peripheral lesions such as lattices (31%), snail track lesions (10.4%), peripheral retinoschisis (7.5%), nonspecific pigmented doubtful lesions (13.2%), WWOP (7.5%), paving stone (6.6%), peripheral retinal detachment (3.8%) along with congenital hypertrophy of the retinal pigment epithelium (CHRPE), microcystoid lesions, and dark without pressure areas were identified. All the lesions could be imaged with the help of UWF OCT, which significantly improved diagnostic capability by enabling early identification of specific structural features, such as vitreoretinal attachment and traction, full-thickness holes or tears, and subretinal fluid, that were not as evident on indirect ophthalmoscopy.

Conclusions: UWF-OCT deepens our understanding of the structure of the retina and its associated peripheral pathologies, allowing early recognition of vision-threatening lesions that may influence clinical management.

Abstract No.: 200249
Panel No.: APVRS-011
Foveal Avascular Zone Area in Patients With Systemic Lupus Erythematosus (SLE) Using Optical Coherence Tomography Angiography (OCTA)

*First Author: Ploysai **RUJKORAKARN***
*Co-Author(s): Kanyanat **PHOLPRATHOM**, Parinya **SRIHATRAI***

Purpose: To evaluate the areas of the superficial foveal avascular zone (SFAZ) and deep foveal avascular zone (DFAZ) of patients with SLE by using an OCTA, and to associate the SFAZ and DFAZ areas with medication.

Methods: This study included 36 eyes of 36 patients with SLE and 33 eyes of 33 healthy controls. The SFAZ area, DFAZ area, and central retinal thickness (CRT) were measured with the Spectralis OCTA. Data on medical history and medication were collected to identify associations with the SFAZ area and DFAZ area.

Results: The mean SFAZ area and DFAZ area in patients with SLE were larger than the healthy controls without statistical significance (both $P > 0.05$). CRT was found to be thinner in patients with SLE ($P < 0.05$). There was no association between either the SFAZ area or the DFAZ area with duration of hydroxychloroquine or chloroquine use and immunosuppressive therapy (both $P > 0.05$).

Conclusions: The areas of SFAZ and DFAZ in patients with SLE were not significantly larger than the healthy controls, while CRT was significantly thinner.

Abstract No.: 200778
Panel No.: APVRS-012
Longitudinal Treatment Response in Proliferative Diabetic Retinopathy (PDR) Tracked With Ultra-Widefield Swept-Source Optical Coherence Tomography Angiography (UWF-SSOCTA) – DRIVE PDR study

*First Author: Yue **QIU***
*Co-Author(s): Yusra **ASAD**, Wei Hing **SEAH**, Wenjun **SONG**, Sandy Wenting **ZHOU**, Lingyi **ZHUANG***

Purpose: To characterise six-month vascular and vitreoretinal interface changes after treatment in PDR using UWF-SSOCTA.

Methods: In this prospective longitudinal study, 42 eyes of 26 patients were imaged with 29 × 24 mm and 6 × 6 mm UWF-SSOCTA at baseline, 1, 3, and 6 months. Neovascularizations (NVs) size on vitreoretinal segmentation and nonperfusion area (NPA) on all-retinal-layer segmentation were quantified using customized artificial intelligence algorithms with manual adjustment. Other key parameters include foveal avascular zone (FAZ), parafoveal vessel density (VD), and the status of posterior vitreous detachment (PVD).

Results: Baseline imaging confirmed NV in every eye and showed a moderate correlation between total NPA and FAZ size ($r = 0.465$, $P < 0.001$). Larger NPAs were linked to higher NV counts ($P = 0.007$) and more posteriorly located NV elsewhere (NVE) ($P = 0.02$). The mean NV size fell significantly after treatment, with the steepest decline at month 1; 33 eyes (78 %) showed regression, nine progressed.

Adjunct anti–vascular endothelial growth factor produced a larger, though nonsignificant, additional NV reduction (P = 0.68). Global ischemic metrics — NPA Index (total NPA/total gradable area), FAZ, and VD — remained stable over six months (P = 0.47, 0.36, 0.23). Partial PVD at NV sites was present in 12 eyes at baseline; three progressed, and two developed vitreous haemorrhage attributable to posterior hyaloid traction.

Conclusions: UWF-SSOCTA offers a rapid, repeatable, and quantifiable tool for monitoring PDR therapy, including tracking vascular response, detecting tractional risk, and guiding treatment decisions.

Ocular Oncology & Pathology

Abstract No.: 200101
Panel No.: APVRS-016
From Ptosis to Diagnosis: Unmasking an Orbital Mass Mimicking Intraocular Disease

*First Author: Andrei **MARTIN***
*Co-Author(s): Raphael **GUMAFELIX***

Purpose: To present a case of a 27-year-old female with an orbital solitary fibrous tumor (SFT), initially misdiagnosed as myasthenia gravis, highlighting the diagnostic challenges and the importance of histopathological examination.

Methods: A 27-year-old female presented with right-sided ptosis and blurred vision. She was initially treated with pyridostigmine, but her symptoms persisted. Further ophthalmic examination revealed a pigmented, elevated lesion in the inferonasal periphery of the right eye. The magnetic resonance imaging identified a 2.1 x 2.5 x 2.7 cm lobulated, well-defined mass in the inferomedial orbit, exhibiting hypointensity on T1-weighted images and hyperintensity on T2-weighted images, along with intralesional flow voids indicative of vascularity. The lesion caused superolateral displacement of the right globe, as well as the adjacent medial and inferior rectus muscles. Based on these findings, a medial orbitotomy via a transconjunctival approach was performed. Histopathological and immunohistochemical analyses were conducted to determine the nature of the tumor.

Results: Histopathological examination revealed a spindle cell neoplasm with myxoid features, and immunohistochemical staining demonstrated diffuse positivity for STAT6, along with focal positivity for CD34 and smooth muscle actin (SMA), which collectively confirmed the diagnosis of SFT. The patient's postoperative recovery was uneventful, with complete resolution of the initial symptoms.

Conclusions: Orbital SFTs, though rare, can present with clinical features similar to more common orbital lesions. This case underscores the necessity of a high index of suspicion and thorough diagnostic investigation, including histopathology and immunohistochemistry, to ensure proper diagnosis and treatment.

Abstract No.: 200161
Panel No.: APVRS-015
Ophthalmic Manifestations and Treatment Outcomes in Leukemia: A Comparative Analysis of Clinical Spectrum, Visual Prognosis and Predictors of Disease Remission Across Subtypes

*First Author: Dhwanee **AGARWAL***
*Co-Author(s): Vishal **RAVAL***

Purpose: To conduct a comprehensive analysis of ophthalmic manifestations in leukemic patients and evaluate their impact on the visual outcomes and disease remission.

Methods: This retrospective, comparative study included 244 patients (378 eyes) diagnosed with leukemia between January 2016 and 2024. Data included demography, leukemia type, ophthalmic manifestations, imaging modalities, treatment modalities (ocular and systemic), treatment outcomes (relapses or remission), and final visual acuity. Univariate and multivariate regression analyses were performed to identify correlations and predictive features associated with visual outcomes.

Results: The mean age of patients was 34.9 ± 22.1 years (range 1-88 years). Acute lymphocytic

leukemia (ALL) was the most common subtype (58%), followed by chronic myeloid leukemia (CML; 20%). Acute forms manifested earlier in life and were more aggressive. The presence of posterior segment manifestations (64%) was more than anterior segment manifestations (52%). Myeloid leukemia types were more often associated with hemorrhagic manifestations, whereas lymphoid types were associated with nonhemorrhagic manifestations. Univariate analysis showed that the presence of epiretinal membrane (odds ratio [OR] 0.110, 95% confidence interval [CI]: 0.012-0.951, P = 0.04), submacular hemorrhage (OR 0.091, 95% CI: 0.010-0.763, P = 0.027), and type of leukemia — ALL (OR 3.195, 95% CI: 1.697-6.012, P < 0.000,) and/or CML (OR 6.39, 95% CI: 3.130-13.041, P < 0.000) — had significant association with poor visual outcome. Multivariate analysis revealed ALL (OR 2.769, 95% CI: 1.392-5.507, P = 0.004) and CML (OR 7.313, 95% CI: 3.326-16.074, P < 0.000) as independent predictors of poor visual outcome.

Conclusions: Ophthalmic manifestations are major diagnostic and prognostic clues for leukemia. Pattern recognition facilitates timely recognition, risk stratification, management, and remission prediction.

Pediatric Retina

Abstract No.: 200158
Panel No.: APVRS-017
Oral Fundus Fluorescein Angiogram Detects Reactivation Post–Anti-Vascular Endothelial Growth Factor (Anti-VEGF) in Aggressive Retinopathy of Prematurity (A-ROP)

*First Author: Akash **BELENJE***
*Co-Author(s): Subhadra **JALALI**, Tapas **RANJAN PADHI***

Purpose: A utility, safety, and feasibility study of office-based non-contact ultra-widefield oral fundus fluorescein dye angiography (NC-UWF-OFDA) aimed to assess disease reactivation in babies treated with intravitreal anti-VEGF for A-ROP.

Methods: Eyes clinically suspected to have a possible or definite reactivation after anti-VEGF injection were included in this pilot study. NC-UWF-OFDA was performed in the office setting. Imaging was done prospectively in preterm babies with A-ROP injected with anti-VEGF. OFDA images were analyzed for signs of reactivation.

Results: A total of 20 eyes of 10 preterm babies treated with anti-VEGF underwent NC-UWF-OFDA. The OFDA images were analyzed to assess the pattern and dynamics of retinal vasculature with a special focus on detecting the active new vessels through leakage, the pattern of vasculature at the vascular-avascular junction, and delineation of the persistent avascular retina (PAR). Seven eyes were confirmed with reactivation of ROP requiring treatment, while the rest were followed up. None of the subjects had dye or procedure-related systemic adverse events.

Conclusions: NC-UWF-OFDA is safe and effective in the diagnosis of reactivation of ROP following anti-VEGF injections. A better appreciation of retinal vascular dynamics with accurate delineation of the posterior extent of capillary nonperfusion areas, PAR, and early definitive detection of active neovascularization helped in formulating the extent of laser treatment needed, including intraoperatively. This helped avoid unnecessary parenteral injections/general anesthesia for evaluation of disease reactivation and over-treatment of cases having clinical suspicion of reactivation during fundoscopy.

Abstract No.: 201141
Panel No.: APVRS-018
Retinopathy of Prematurity Screening – Sankara – Skill Transfer System (ROP-SSTS)

*First Author: Mahesh **SHANMUGAM***
*Co-Author(s): Divyansh **MISHRA**, Kavya **S***

Purpose: To design a do-it-yourself (DIY) cost-effective model that makes training for documenting fundus images during ROP screening feasible and accessible for

ophthalmologists, optometrists, and technicians alike.

Methods: To create a realistic simulation of a newborn baby for screening and documenting with photographs, we utilized an easily available newborn baby mannequin ordered online, which costs approximately Rs 3000. For adequate exposure and ease of placement of the screening probe, the rims of the mannequin's eyes were cut circumferentially. The commercially available Reti Eye by Aurolab was then secured underneath using hot glue after creating access via a coronal incision in the mannequin's head. Printout photographs of various ROP pathologies can be cut, molded, and used as templates to fit into the detachable posterior part of the Reti Eye. Photographs were taken using a 3Netra fundus camera for ROP screening. Training for optometrists who conduct community ROP screening was performed using this model. This activity aided in improving hand-eye-leg coordination while capturing images quickly in children who are usually crying and moving their heads and eyes during the examination.

Results: It was very effective in training optometrists, which translated into better remote ROP screening.

Conclusions: Our DIY cost-effective assembly can be easily employed for the training of ophthalmologists, optometrists, and technicians in documenting images during ROP screening and honing both indirect and direct ophthalmoscopy skills.

Abstract No.: 200124
Panel No.: APVRS-019
Topical and Oral Carbonic Anhydrase Inhibitor Combination Therapy in Juvenile Retinoschisis: A Case Report

*First Author: Michelle **DAGTA***
*Co-Author(s): Maria Christine **DY**, John Vyle **PASCARAN***

Purpose: To report a clinically diagnosed case of juvenile retinoschisis managed with short-term topical and oral carbonic anhydrase inhibitor combination therapy.

Methods: A 10-year-old boy seen at a Philippine tertiary government hospital came for chronic progressive blurring of vision in the left eye. The medical and family histories were unremarkable. Visual acuity was 20/25 and counting fingers on the right and left eyes, respectively. 30 prism diopters of left exotropia was noted, with a cycloplegic refraction of +7.00 -0.75 x 90. The rest of the anterior segment was normal for both eyes. The clinical and diagnostic examinations revealed bilateral asymmetrical retinoschisis. Perimacular radial streaks and a dome-shaped inferotemporal retinal elevation with atrophic edges were observed. He was referred for genetic counseling, but genetic and electrophysiologic tests could not be performed at that time.

Results: Dorzolamide eyedrops and oral acetazolamide were started thrice a day with regular follow-ups and electrolyte monitoring. Two months into treatment, vision in the left eye improved to 20/200, with no reported side effects. Repeat diagnostic imaging showed a relative decrease in central subfield thickness along with smaller cystic spaces. Monitoring the long-term response to medication, regular funduscopy, and serial refraction will be prioritized.

Conclusions: Juvenile retinoschisis is an X-linked recessive disorder and is the most common macular dystrophy among young males. Since there is no proven effective treatment, amblyopia and low vision rehabilitation are important. Despite its progressive nature, studies have shown the potential efficacy and safety of carbonic anhydrase inhibitors in terms of visual and anatomical improvement.

Retina (Medical)

Abstract No.: 200531
Panel No.: APVRS-038
Automated Quantification of Retinal Fluid in Patients With Diabetic Macular Edema (DME): Analysis of Faricimab Versus Aflibercept in YOSEMITE/RHINE

*First Author: Nancy **HOLEKAMP***
*Co-Author(s): Thomas **ALBRECHT**, Kara **GIBSON**, Derrek **HIBAR**, Katie **LITTS**, Huanxiang **LU**, Simon **SZETO**, Gavin **TAN**, Ming **YANG***

Purpose: This YOSEMITE/RHINE (NCT03622580/NCT03622593) post-hoc analysis quantifies changes in retinal fluid volume, intraretinal fluid (IRF), and subretinal fluid (SRF) with faricimab using the novel retinal OCT (optical coherence tomography) segmentation algorithm (ROSA) in patients with DME.

Methods: Patients (pooled N = 1891) were randomized 1:1:1 to faricimab 6.0 mg every eight weeks (Q8W; n = 631) or via treat-and-extend (T&E)-based regimen (Q4W–Q16W; n = 632), or aflibercept 2.0 mg Q8W (n = 627). Patients with baseline Spectralis OCT images and fluid volume measurement (faricimab Q8W: n = 504; faricimab T&E: n = 506; aflibercept Q8W: n = 492) are analyzed. Fluid volume (3 mm central subfield; baseline W100) was quantified using novel artificial intelligence/machine learning-based ROSA with R2 scores characterizing performance: IRF: 0.94; SRF: 0.88.

Results: The mean (standard error) baseline SRF and IRF volumes were 38.8 (5.6), 43.7 (5.9), and 42.7 (5.3), and 249.5 (9.5), 240.4 (9.3), and 261.1 (9.5) nL for faricimab Q8W, faricimab T&E, and aflibercept Q8W, respectively. The adjusted mean (95% confidence interval [CI]) SRF changes from baseline at year 2 were comparable for faricimab Q8W (-40.4 [-41.9, -38.9] nL), faricimab T&E (-40.3 [-41.7, -38.8] nL), and aflibercept Q8W (-38.6 [-40.1, -37.1] nL). Corresponding IRF changes were greater for faricimab Q8W (-212.0 [-221.6, -202.4] nL) and faricimab T&E (-212.1 [-221.5, -202.8] nL) versus aflibercept Q8W (-184.1 [-193.8, -174.3] nL); differences versus aflibercept: -27.9 nL(-41.6, -14.2; P < 0.0001) for faricimab Q8W; -28.1 nL(-41.6, -14.5; P < 0.0001) for faricimab T&E. At week 12, the adjusted mean (95% CI) IRF changes from baseline were greater for faricimab Q8W (-158.3 [-168.3, -148.2] nL) and faricimab T&E (-168.8 [-178.8, -158.8] nL) versus aflibercept Q8W (-143.6 [-153.8, -133.4] nL). Differences versus aflibercept: -14.7 nL (-29.0, -0.4; P = 0.0446) for faricimab Q8W; -25.2 nL (-39.5, -10.9; P = 0.0006) for faricimab T&E.

Conclusions: Quantitative OCT assessment demonstrated that IRF volume reductions were greater with faricimab versus aflibercept as early as week 12 and through year 2 in DME patients, supporting faricimab's potential to improve DME disease control beyond vascular endothelial growth factor inhibition alone.

Abstract No.: 201263
Panel No.: APVRS-033
Bilateral Multifocal Central Serous Chorioretinopathy With Subretinal Fibrosis in a 57-Year-Old Male: A Case Report

*First Author: Arianne **BALUYUT***
*Co-Author(s): Ronnie **MANAYSAY***

Purpose: To report a case of a bilateral multifocal central serous chorioretinopathy with subretinal fibrosis initially treated as a case of Vogt-Koyanagi-Harada disease with corticosteroids.

Methods: A case report.

Results: Presented in this case study is a 57-year-old male with the chief complaint of sudden blurring of vision in the right eye, who was initially treated as a case of Vogt-Koyanagi-Harada Syndrome with oral corticosteroids for a month, but whose vision worsened while on corticosteroids. The patient subsequently developed serous retinal detachment and a suspicious subretinal mass. On fluorescein angiography and optical coherence tomography (OCT) of the macula, it was confirmed to be a subretinal fibrosis in the right eye. Corticosteroids were gradually tapered to

discontinuation, and the patient was started on oral azathioprine, oral spironolactone, and topical brinzolamide. After six months, the patient had an improved visual acuity, had flattening of the initially noted serous retinal detachment in the right eye, and a slight decrease in the size of the subretinal fibrosis seen on repeat OCT scans of the macula.

Conclusions: Care must be taken in the initiation of corticosteroid therapy in a patient with serous retinal detachment, as the use of exogenous corticosteroids may aggravate the condition if it is central serous chorioretinopathy.

Abstract No.: 200672
Panel No.: APVRS-027
Brolucizumab Efficacy and Safety Single-Arm Descriptive Trial in Patients With Persistent Diabetic Macular Edema (pDME) (BEST Study)

*First Author: Dan **CAO***
*Co-Author(s): Yunyan **HU**, Ziyi **HUANG**, Jing **LI**, Anyi **LIANG**, Chenxiao **SHEN**, Honghua **YU**, Chunwen **ZHENG***

Purpose: To evaluate the efficacy and safety of brolucizumab in patients with pDME (BEST study, NCT06498050).

Methods: The BEST study is a 28-week, prospective, single-arm, open-label clinical trial involving 52 Chinese subjects with pDME, defined as central subfield thickness (CST) ≥320 µm despite ≥3 anti–vascular endothelial growth factor injections within 20 weeks, and baseline best-corrected visual acuity (BCVA) 23-78 letters. Study eyes receive brolucizumab 6 mg injections every six weeks (at week 0, 6, 12, 18, and 24) or switch to 12-week intervals (at week 0, 6, 12, and 24) if no disease activity at week 18.

Results: This interim analysis included the first 43 consecutive subjects completing 28-week follow-up. At week 28, the proportion of subjects with CST <300 µm was 65.1% (95% confidence interval [CI]: 49.0–78.6), and the proportion achieving a ≥5-letter BCVA gain was 90.7% (95% CI: 77.0–97.0). The mean CST (µm) decreased over time (baseline: 507.7 ± 20.5 µm; week 28: 305.4 ± 12.6 µm, $P < 0.001$), while mean BCVA (letters) improved (baseline: 59.3 ± 2.2; week 28: 72.4 ± 1.8, $P < 0.001$). 90.0% subjects (45/50; 95% CI: 77.4–96.3) had no disease activity at week 18 and extended to 12-week intervals. Intraocular inflammation occurred in one eye (1.9%) and resolved rapidly after topical steroids.

Conclusions: Brolucizumab 6 mg administered every six weeks achieved clinically significant anatomical and visual improvement in patients with pDME.

Abstract No.: 200125
Panel No.: APVRS-044
Central Retinal Vein Occlusion (CRVO) in a Young Filipino Male With Ulcerative Colitis: A Case Report

*First Author: Noriell Jonathan **MAMACLAY***
*Co-Author(s): Maria Christine **DY***

Purpose: To report a rare case of CRVO with macular edema in the setting of ulcerative colitis (UC) in a young Filipino male treated with intravitreal anti–vascular endothelial growth factor (anti-VEGF).

Methods: A 34-year-old Filipino male diagnosed with steroid-dependent moderate-grade UC presented with one-month blurring of vision in the left eye. Vision was 15/400 with normal anterior segment findings. Fundoscopy showed a hyperemic disc, dilated and tortuous retinal veins, and diffuse intraretinal hemorrhages. Optical coherence tomography (OCT) revealed significant macular edema. Treatment with intravitreal bevacizumab was initiated five months after the UC diagnosis, with subsequent serial monitoring. His coagulability workup tested negative, and the fellow eye was unremarkable.

Results: After three loading doses of bevacizumab, vision improved to 20/50 with residual macular edema on repeat OCT. Likewise, there was a decrease in intraretinal hemorrhages. At this time, the patient was still maintained on oral prednisone and mesalamine, with no reported UC flare-ups.

The continuation of anti-VEGF injections with serial monitoring was advised.

Conclusions: Retinal vein occlusion in inflammatory bowel disease is an uncommon ophthalmic presentation. Thus, it should be included at any stage of UC monitoring. Molecular mimicry and cytokine overexpression are said to play a role in pathogenesis. Treatment combines intravitreal anti-VEGF or steroid implants and the control of the underlying systemic disease with or without oral steroids and immunotherapy. The prognosis depends on the initial presentation; therefore, a multidisciplinary approach is critical for prompt diagnosis and early management, preventing further complications.

Abstract No.: 200512
Panel No.: APVRS-023
Chronic Central Serous Chorioretinopathy (cCSC) With and Without Myopia: Clinical Features and Response to Half-Dose Photodynamic Therapy (PDT)

*First Author: Jhih-yi **LU***
*Co-Author(s): San-ni **CHEN**, Yu-te **HUANG***

Purpose: To compare the clinical characteristics, multimodal imaging features, and treatment response to half-dose PDT between patients with cCSC with and without myopia.

Methods: Sixty-six eyes with cCSC received a single session of half-dose PDT and were followed for at least six months. Patients were divided into myopic and nonmyopic groups based on spherical equivalent less than −0.5 diopters. Multimodal imaging data, including optical coherence tomography (OCT), OCT angiography, fundus autofluorescence (FAF), and indocyanine green angiography (ICGA), were analyzed.

Results: The study included 38 eyes in the myopic group and 28 in the nonmyopic group. Among myopic eyes, 65.8% had low myopia, 28.9% moderate, and 5.3% high myopia. The myopic group had significantly less subretinal fluid at baseline (145.1 ± 74.4 µm vs. 193.6 ± 113.1 µm, P = 0.039), but more frequent photoreceptor outer segment (OS) elongation (86.8% vs. 64.3%, P = 0.031) and mottled FAF (55.3% vs. 21.4%, P = 0.010). In contrast, the nonmyopic group more often showed hyper or hyper/hypo FAF. Multivariate analysis identified OS elongation and mottled FAF as independent predictors of both myopic cCSC (P = 0.049 and P = 0.005, respectively) and more myopic refractive status (P < 0.001 and P = 0.005, respectively).

Conclusions: Myopia may influence the structural presentation and retinal response of cCSC, with unique imaging features such as higher rates of OS elongation and mottled FAF, despite less subretinal fluid. These findings support the need for tailored evaluation in myopic eyes undergoing treatment for cCSC.

Abstract No.: 200396
Panel No.: APVRS-031
Color Doppler Evaluation of Retrobulbar Arterial Parameters in Diabetic Patients Without and With Retinopathy

*First Author: Vivek **PATRE***
*Co-Author(s): Ankit **AGRAWAL**, Nidhi **PANDEY**, Amrita **VERMA***

Purpose: To study and compare the retrobulbar arterial parameters in diabetic patients without and with retinopathy, and in non-diabetic controls.

Methods: A cross-sectional analytical study including patients over 18 years with diabetes mellitus without and with retinopathy and age-matched controls. We excluded patients with ocular infection/inflammation, previous ocular trauma/surgery, glaucoma, ocular anomaly, hypertension, cardiovascular disease, vascular disease, and medications affecting systemic circulation. End diastolic velocity (EDV) and peak systolic velocity (PSV) of retrobulbar arteries using Doppler ultrasound was measured. Resistive Index (RI) calculated.

Results: A total of 116 patients with 55 controls and 61 diabetics. Epidemiological data was comparable. The mean RI of ophthalmic artery (OA) (cm/s), central retinal artery (CRA), and posterior ciliary artery (PCA) was highest in diabetics with retinopathy and statistically

significant. PSV was highest in diabetic without retinopathy, nondiabetics, and diabetic without retinopathy in OA, CRA and PCA, respectively. EDV was highest in the control group for all three arteries. The receiver operating characteristic (ROC) for CRA has the predictive ability to discriminate diabetic retinopathy of 78% sensitivity and 71% specificity. The ROC curve for PCA shows 100% sensitivity and 89% specificity.

Conclusions: Diabetic patients with and without retinopathy had a significantly higher RI values in all retrobulbar arteries. Retrobulbar arterial Doppler sonography can thus direct clinicians toward the use of more rigorous monitoring and the initiation of appropriate treatment at an early stage when the effects of the disease are still reversible.

Abstract No.: 200168
Panel No.: APVRS-029
Combined Central Retinal Artery and Vein Occlusion in a 47-Year-Old Male With Behcet's Disease

*First Author: Lyll Karen **ARRIOLA***
*Co-Author(s): Lorenz Robert **ONG***

Purpose: To describe a rare case of combined central retinal artery and vein occlusion in a 47-year-old patient with Behcet's disease.

Methods: A case report was done.

Results: This is a case of a 47-year-old male who had a sudden onset of severe, painless unilateral vision loss in his left eye one month before the initial consultation. He also noted the onset of aphthous oral ulcers during symptom onset. Visual acuity was counting fingers in the left eye and 20/20 in the right eye. Anterior segment findings were unremarkable for both eyes. Pertinent findings in the left eye included vitritis, disc hyperemia, venous dilation and tortuosity, diffuse intraretinal hemorrhages with Roth spots, macular pallor, and hard and soft exudates. The fundus of the right eye demonstrated slight vascular tortuosity with soft exudates at the macula. Fluorescein angiography revealed delayed arterial filling with dye leakage from the disc and retinal veins, as well as obstruction of the retinal veins in the left eye—findings consistent with a combined central retinal artery and vein occlusion. The patient was subsequently referred to rheumatology and started on methotrexate. Intravitreal bevacizumab was given for the macular edema. On subsequent follow-ups, the patient showed improved vision, with the most recent best-corrected visual acuity recorded at 20/200 in the left eye.

Conclusions: Bechet's disease should be considered in cases of combined central retinal artery and vein occlusion with a history of recurrent oral ulcers, ocular inflammation, or other findings associated with Behcet's disease. Early diagnosis and treatment are essential to prevent vision loss.

Abstract No.: 200362
Panel No.: APVRS-021
Comparative Efficacy of Smartphone Imaging With 3D-Printed Adaptor Versus Fundus Camera for Diabetic Retinopathy (DR) Screening

*First Author: Eleonore **IGUBAN***
*Co-Author(s): Charlene **TABLANTE***

Purpose: To determine if dilated smartphone photography with a 3D-printed adaptor for a fundus lens can be an alternative screening tool for DR.

Methods: This was a single-center, prospective, comparative study of 102 eyes of patients with diabetes mellitus. DR screening was performed using binocular indirect ophthalmoscopy (BIO) as the reference standard, alongside two imaging modalities: a traditional fundus camera and a smartphone equipped with a 3D-printed adaptor. Coded images were evaluated by three masked retina specialists. Sensitivity, specificity, predictive values, and likelihood ratios were calculated for both imaging modalities.

Results: DR gradings of both imaging modalities were compared to BIO and showed very good agreement (kappa value 0.94-0.96, 95% confidence interval [CI]: 0.93-0.99). Both have high levels of interobserver reliability

(kappa value 0.88-0.92, 95% CI: 0.84-0.96) and intraobserver reliability (kappa value 0.85-1.00, 95% CI: 0.64-1.00). Smartphone and Visucam 500 images can detect presence of DR with a sensitivity of 93.9% (95% CI: 83.1-98.7) and 91.8% (95% CI: 80.4 97.7); and a specificity of 90.6% (95% CI: 79.3-96.9) and 92.5% (95% CI: 81.8-97.9), respectively, as well as the presence of vision threatening DR with a sensitivity of 100% (95% CI: 91.2-100) and specificity of 85.5% (95% CI: 74.2-93.1). Image quality was similar between the two imaging modalities (P = 1.00).

Conclusions: Smartphone-based imaging with an attached 3D-printed adaptor offers high sensitivity and reliability, comparable to a traditional fundus camera, and can be used an alternative for DR screening.

Abstract No.: 201020
Panel No.: APVRS-020
Disorganization of Retinal Outer Layers (DROL) and Its Association With Fluid Dynamics and Visual Outcomes in Neovascular Age-Related Macular Degeneration (nAMD)

*First Author: Miranda Chun-ya **KANG***
*Co-Author(s): Kuan-jen **CHEN**, Wei-yu **CHIANG**, Heng-chiao **HUANG**, Yih-shiou **HWANG**, Chi-chun **LAI**, Chien-hsiung **LAI**, Ju-hsien **LI**, Yeung **LING**, Pei-ting **LU**, Shu-yen **PENG**, Tsung-hsien **TSAI**, Wei-chi **WU***

Purpose: To evaluate the association between DROL and both fluid distribution and visual outcomes in patients with nAMD receiving anti–vascular endothelial growth factor.

Methods: This multicenter, retrospective study included 215 treatment-naïve eyes, which were followed for ≥2 years. Optical coherence tomography (OCT) and best-corrected visual acuity (BCVA) were assessed at baseline, year 1, and year 2. DROL in the outer nuclear layer (ONL), external limiting membrane, and ellipsoid zone within the central one-mm fovea was graded on a four-point scale and categorized as preserved or compromised. Intraretinal fluid (IRF) and subretinal fluid (SRF) were analyzed relative to DROL severity. Linear regression models identified baseline predictors of BCVA at two years.

Results: Eyes with preserved ONL showed significant BCVA improvement at one year ($P < 0.001$) and two years ($P = 0.027$), while ONL-compromised eyes did not. In multivariate analysis, a higher ONL score ($P = 0.009$), worse baseline BCVA ($P < 0.001$), older age ($P < 0.001$), and the presence of subretinal fibrosis ($P < 0.001$) were independently associated with worse BCVA at two years. DROL severity correlated with fluid type: IRF predominated in compromised layers, while SRF was more common in preserved layers. A similar distribution could also be observed after excluding eyes with type 3 neovascularization.

Conclusions: DROL grading may help predict visual outcomes and fluid patterns in nAMD. Preserved layers are linked to SRF and better vision, while compromised layers are related to IRF and a worse prognosis.

Abstract No.: 200510
Panel No.: APVRS-026
Evaluating Early Anatomic Response to Faricimab Versus Aflibercept in Treatment-Naïve Neovascular Age-related macular degeneration (nAMD): A Real-World Study

*First Author: San-ni **CHEN***
*Co-Author(s): Yu-te **HUANG**, Hsiao-fan **TUNG***

Purpose: To compare the efficiency of faricimab versus 2 mg aflibercept in treatment-naïve nAMD in a real-world setting.

Methods: This single-center, retrospective case series included 62 eyes treated with a six-month treat-and-extend regimen (30 aflibercept, 32 faricimab). Data collected included baseline demographics, best-corrected visual acuity (BCVA), central macular thickness (CMT), retinal pigment epithelium detachment (RPED) thickness, and the presence of subretinal fluid (SRF), RPED, intraretinal fluid (IRF), and hyperreflective foci (HRF). The main outcome measures were the reduction of CMT and RPED thickness between the two groups.

Results: No significant differences in baseline demographics were observed. CMT reduction

was consistently greater in the faricimab group across all six months: 170.9 ± 29.1 vs. 145.1 ± 22.7 μm (month 1), 163.5 ± 33.2 vs. 152.5 ± 25.8 (month 2), 197.4 ± 48.2 vs. 131.5 ± 36.5 (month 3), 181.8 ± 33.9 vs. 163.8 ± 36.9 (month 4), 244.3 ± 55.2 vs. 102.4 ± 35.3 (month 5, P = 0.042), and 209.9 ± 41.1 vs. 182.0 ± 27.9 (month 6). A statistically significant difference favoring faricimab was observed at month 5. Larger reduction of RPED thickness was also observed in the faricimab group beginning at month 1 (reduction: 246.8 ± 42.4 vs. 181.9 ± 22.6), with the difference gradually narrowing by month 6 (reduction: 186.7 ± 40.9 vs. 157.6 ± 21.9). Although the reductions were numerically greater in the faricimab group throughout, none reached statistical significance. Final BCVA, CMT, RPED thickness, and the presence of SRF and HRF showed no significant differences between groups (P > 0.05).

Conclusions: Dual angiopoietin-2/vascular endothelial growth factor A (Ang-2/VEGFA) inhibition with faricimab may be associated with more favorable anatomic improvements, compared to aflibercept, with comparable functional outcomes in treatment-naïve nAMD eyes.

Abstract No.: 200874
Panel No.: APVRS-041
Evaluation of Sodium-Glucose Cotransporter-2 Inhibitors (SGLT-2i) and Dipeptidyl Peptidase-4 Inhibitors (DPP-4i) in Modulating the Progression of Diabetic Retinopathy (DR) and Development of Proliferative Diabetic Retinopathy (PDR)

*First Author: Simon **SZETO***
*Co-Author(s): Carol **CHEUNG**, Timothy **LIN**, Ziqi **TANG***

Purpose: To investigate whether there are associations between the use of SGLT-2i, DPP-4i, or both and the development or progression of DR and PDR.

Methods: This prospective cohort, new-user design study included individuals with diabetes who had at least three years of follow-up at The Chinese University of Hong Kong. Participants were categorized into four groups: SGLT-2i only (Group 1), DPP-4i only (Group 2), both SGLT-2i and DPP-4i (Group 3), and neither SGLT-2i nor DPP-4i (Group 4). Patients who used glucagon-like peptide-1 receptor agonists were excluded. Cox regression models were used to estimate hazard ratios, adjusting for age, age at diabetes diagnosis, duration of diabetes, HbA1c, estimated glomerular filtration rate, body mass index, exposure window, and baseline DR severity.

Results: The study included 4968 visits from 724 eyes across 369 patients (mean age [standard deviation, SD]: 60.0 [12.8] years; 54.0% male), with a mean follow-up duration of 4.68 years. A total of 75, 161, 178, and 310 patients were recorded for Groups 1 through 4, respectively. Compared to Group 4, Groups 1 through 3 did not exhibit significantly lower risks for DR development or progression. However, Group 2 (3.44 [1.47–8.07]) and Group 3 (4.25 [1.52–11.9]) showed an increased risk for developing PDR.

Conclusions: The use of SGLT-2i, DPP-4i, or both was not associated with a lower risk of DR development or progression. However, DPP-4i use may be linked to a higher risk of developing PDR.

Abstract No.: 200559
Panel No.: APVRS-032
FURGGHORN study: The Singapore Cohort

*First Author: Kelvin **TEO***
*Co-Author(s): Hiok Hong **CHAN**, Gemmy **CHEUNG**, Beau **FENNER**, Farah **ILYANA**, Charles **ONG**, Shaun **SIM**, Christopher **SUN**, Anna **TAN**, Tien-en **TAN**, Chenxi **ZHANG***

Purpose: Patients with neovascular age-related macular degeneration (nAMD) and persistent fluid are at higher risk of suspending treatment because of the high treatment burden. The efficacy of faricimab in treatment-naïve nAMD has been shown, but the effect on previously treated eyes has not been extensively studied. This study aims to prospectively evaluate the anatomical and functional outcomes after switching from aflibercept/ranibizumab to faricimab in previously treated nAMD.

Methods: A one-year prospective, single-arm, open-label study was conducted. Patients aged ≥50 years with typical nAMD (diagnosed within 36 months of screening, best-corrected visual acuity [BCVA] ≥6/120, no geographic atrophy [GA] or fibrosis affecting the central subfield, and no other ocular comorbidities) who were receiving only intravitreal ranibizumab or aflibercept with persistent fluid at a treatment interval of less than 12 weeks were recruited. Patients received four monthly doses of faricimab before transitioning to a treat-and-extend regimen with a maximum interval of 16 weeks.

Results: A total of 20 patients were recruited for the study. The prior therapy for these patients included ranibizumab (90%) and aflibercept (10%). The types of choroidal neovascularization (CNV) observed were type 1 (60%), type 2 (5%), mixed (10%), and polypoidal choroidal vasculopathy (PCV; 25%). After switching to Faricimab, the following results were noted: 1) The BCVA was maintained, with a baseline of 70.5 ± 10.8 letters compared to 69.8 ± 12.6 letters after one year. No patients lost ≥15 letters; 2) There was a reduction in the mean central subfield thickness (CST), with a baseline of 418.6 ± 170.1 µm compared to 293.6 ± 86.3 µm after one year (P = 0.004); and 3) The mean maximum fluid-free interval increased from a baseline of 5.0 ± 1.7 weeks to 9.0 ± 4.3 weeks after one year (P = 0.001). Additionally, no patients had a shorter maximum fluid-free interval after switching.

Conclusions: Switching to faricimab can give patients better anatomical improvement and longer durability, even if there was a suboptimal response to ranibizumab/aflibercept.

Abstract No.: 200126
Panel No.: APVRS-047
Familial Drusen With Unilateral Choroidal Neovascularization (CNV) in a Young Asian Female: A Case Report

First Author: John Vyle ***PASCARAN***
Co-Author(s): Maria Christine ***DY***

Purpose: To report a case of familial drusen with unilateral CNV in a young Filipino female treated with intravitreal anti–vascular endothelial growth factor (anti-VEGF).

Methods: A 41-year-old Filipino female came in for a two-month history of a central scotoma in the right eye. Vision was 15/400 and 20/400 on the right and left eyes, respectively, with normal anterior segment findings. Fundoscopy showed bilateral symmetrical yellow subretinal deposits in the midperiphery, with a visibly elevated round macular lesion on the right. Diagnostic imaging revealed multiple hyperreflective nodules at the level of the pigment epithelium, corresponding to an irregular dome-shaped elevation and subretinal fluid. With features suggestive of CNV, she was placed on interval intravitreal bevacizumab with a guarded prognosis. The patient also reported that her mother and sibling had similar symptoms. Genetic counseling was arranged, but genetic and electrophysiologic tests could not be performed at that time.

Results: After three loading doses of bevacizumab, anatomical improvement was noted, with decreased central subfoveal thickness and subretinal fluid. However, vision remained stable. Although the CNV complex was improving, repeat imaging revealed the beginning of mild vitreomacular traction. Amsler grid monitoring was advised, along with long-term observation.

Conclusions: Familial drusen is a form of macular degeneration in young adults. Patients are mostly asymptomatic in the early stages until central atrophy progresses. There is currently no known effective treatment, but close monitoring is warranted for possible complications such as CNV, with the goal of controlling lesion activity. Family and genetic

counseling are also recommended to establish prognosis.

Abstract No.: 200822
Panel No.: APVRS-028
Faricimab Versus Aflibercept 2 mg in Treatment-Naïve Neovascular Age-Related Macular Degeneration (nAMD) and Polypoidal Choroidal Vasculopathy (PCV): A Head-to-Head Study Comparing Early Anatomical Outcomes and Exploring Their Predictive Value in Taiwan
*First Author: De-kuang **HWANG***
*Co-Author(s): Chi-chun **YANG***

Purpose: Although TENAYA/LUCERNE showed similar one-year best-corrected visual acuity (BCVA) between faricimab and aflibercept, data on early anatomical responses and predictive markers in Asian patients remain limited. Therefore, we conducted this study to address this gap by comparing early anatomical outcomes and evaluating their predictive value for one-year vision in treatment-naïve nAMD and PCV.

Methods: This retrospective study included 76 eyes (38 per group) treated with three monthly loading injections of faricimab (6.0 mg) or aflibercept (2.0 mg), followed by a treat-and-extend regimen, with monthly assessments for four months and at one year. Primary outcome: BCVA; secondary outcomes: optical coherence tomography biomarkers including central macular thickness (CMT), subretinal fluid, intraretinal fluid, pigment epithelial detachment (PED), subretinal hyperreflective material (SHRM), and hyperreflective foci (HRF).

Results: BCVA, CMT, and PED were similar at one year between groups. Faricimab showed fewer SHRM (P: 0.031) and HRF (P: 0.015) at one year, and achieved earlier sustained dry macula (4.9 vs. 7.3 months, P: 0.039) by Kaplan–Meier analysis. Logistic regression identified SRF at three months (odds ratio: 0.145, P: 0.042) and fellow-eye nAMD (odds ratio: 0.147, P: 0.048) as unfavorable predictors of one-year visual improvement.

Conclusions: Faricimab showed better early anatomical control and earlier sustained dryness, with similar one-year BCVA to aflibercept. Strengths include use of more biomarkers, inclusion of PCV reflecting real-world Asian practice, and defining sustained dryness as a novel stability measure. Further studies are needed.

Abstract No.: 200915
Panel No.: APVRS-034
Genetic Profiling of Single-Nucleotide Polymorphisms (SNPs), Network Analysis, and Biomarker Development of Age-Related Macular Degeneration (AMD)
*First Author: Putrya **HAWA***

Purpose: AMD is caused by complex interactions between genetic predisposition and environmental exposures. This study aimed to identify key genetic variants, molecular pathways, and potential biomarkers associated with AMD, incorporating relevant aspects of the Indonesian population.

Methods: We integrated data from multiple publicly available database, includes: GWAS Catalog, GeneCards, DisGeNET, and KEGG, to discover AMD-associated genes. Functional enrichment analyses were conducted using Gene Ontology (GO) and KEGG. Protein-protein interaction (PPI) networks were constructed by using STRING and Cytoscape to identify hub genes. Allele frequencies of key SNPs were compared between East Asian and South Asian populations using gnomAD and dbSNP.

Results: We identified 247 AMD-related genes enriched in immune response, angiogenesis, and oxidative stress pathways. The PPI network analysis showed central hub genes including CFH, VEGFA, C3, and HTRA1. From the gene expression dataset, 342 DEGs were identified, with 41 overlapping genes. Rare variant and eQTL analyses highlighted novel candidate genes such as BLOC1S1 and B3GLCT, which may play regulatory roles in AMD pathogenesis.

Conclusions: This study provides a comprehensive genetic landscape of AMD by

integrating gene variant databases, expression profiles, and interaction networks, with a special focus on population-specific allele frequencies relevant to Indonesia. Future research should focus on validating these results in a clinical setting.

Abstract No.: 201339
Panel No.: APVRS-039
Mapping the Type 2 Macular Telangiectasia (MacTel) Footprint: Correlation of MacTel Area With Visual Acuity and Disease Stage – A Five-Year Longitudinal Study Analysis

*First Author: Ramesh **VENKATESH***
*Co-Author(s): Gaurav **MALWE***

Purpose: To evaluate the correlation between the extent of MacTel involvement—termed "MacTel area"—on multicolor imaging, disease stage, and best-corrected visual acuity (BCVA) in eyes with type 2 MacTel, and to assess its progression over time.

Methods: In this retrospective longitudinal study, 92 eyes of 49 patients with confirmed type 2 MacTel, were analyzed using multicolor imaging (Spectralis, Heidelberg Engineering). The MacTel area was defined by outlining zones of increased reflectivity to blue light on multicolor images. Each eye was graded at follow-up visits according to the Gass and Blodi and Yannuzzi classification systems. BCVA was recorded and converted to logMAR units. A total of 182 high-quality gradable multicolor images were available. Correlation analyses were performed between the MacTel area, disease stage, and visual acuity. Subgroup comparisons between proliferative and nonproliferative forms were also conducted.

Results: The mean age was 59.6 years. MacTel area correlated positively with stage ($r = 0.544$) and poorer vision ($r = 0.329$). Area increased over time (mean +0.678 mm^2), with vision decline (+0.18 logMAR). Proliferative eyes had larger areas and worse vision ($P < 0.001$).

Conclusions: MacTel area, as measured on multicolour imaging, correlates strongly with disease stage and visual function, and shows progressive enlargement over time. It holds promise as a reliable structural biomarker for disease monitoring, prognostication, and future clinical trials in type 2 MacTel.

Abstract No.: 200742
Panel No.: APVRS-035
New Gene on the Block: A Novel Genetic Link to Retinitis Punctata Albescens (RPA)

*First Author: Manuel Benjamin **IBAÑEZ IV***
*Co-Author(s): Oliver **LISTANO***

Purpose: RPA is most frequently associated with mutations in the retinaldehyde-binding protein 1 gene (RLBP1) but has never been reported with the retinal fascin gene (FSCN2). Preliminary reports have shown cone and rod-cone inherited retinal dystrophy associations in mutations involving FSCN2, but none presented as RPA. We report a Filipino female with an FSCN2 variant who presented findings phenotypically consistent with RPA.

Methods: A 35-year-old Filipino female presented with bilateral blurring of vision especially worse at night after entering her third decade of life. Fundoscopy, fundus autofluorescence, full-field electroretinogram, ocular coherence tomography, and perimetry were consistent with RPA. Inherited retinal dystrophy panel revealed heterozygosity for FSCN2 c.1336C>T (p.Arg446Trp). Segregation analysis done to both parents were negative for this variant.

Results: Patient presented with an RPA phenotype and a variant of unknown significance was found in FSCN2 c.1336C>T (p.Arg446Trp). This missense change has been observed in individuals with clinical features of FSCN2-related retinal dystrophy, specifically nonsyndromic RP but not RPA. The FSCN2 gene currently has no well-established disease association. However, there have been previous reports supporting a correlation with inherited retinal dystrophies, specifically cone-rod dystrophy and autosomal dominant retinitis pigmentosa (ADRP) in four unrelated Japanese families. To our knowledge, this is the first reported case of a patient with a FSCN2 variant and a phenotype of RPA.

Conclusions: This is the first case report of a patient with phenotypical RPA and FSCN2 gene mutation association. This acts as preliminary evidence suggesting a broader role of FSCN2 in the pathogenesis of inherited retinal dystrophies.

Abstract No.: 200580
Panel No.: APVRS-024
Patient Perspectives on Simulated Study Designs for an Oral Therapy for Diabetic Macular Edema (DME)
*First Author: David **ALMEIDA***
*Co-Author(s): Asma **BURALE**, Margaret **CHANG**, Ivana **GUNDERSON**, Drisana **MILSAP**, Shintaro **NAKAO***

Purpose: DME, a complication of diabetic retinopathy, can cause vision loss. Patient perspectives are rarely considered in clinical trial designs, reducing the trials' relevance to patient unmet needs in real-world practice. The purpose of this study was to gather perspectives from patients and clinical trial site staff to optimize the design of a study assessing an oral treatment for DME.

Methods: Virtual interviews were conducted with site staff and patients, during which patients and site staff were asked to rate their interest in participating in the trial. Patients had a confirmed DME diagnosis within three months of the interview, and site staff were experienced in delivering ≥6 DME clinical trials.

Results: Fifteen simulations were conducted with five patients, five investigators, and five site coordinators from the US. The mean age of the patients was 48 years, mean duration since DME diagnosis was three years, and 60% were currently receiving DME treatment. Mode of treatment delivery and transparency of communication regarding the placebo arm were important factors for simulation participants. Convenience of an oral tablet was preferred to standard-of-care intravitreal injections. Patients were interested in flexibility around study visit times. Both patients and site staff had high interest in trial participation (mean interest score 6/7 by patients and 5.7/7 by site staff).

Conclusions: This simulated trial demonstrated the importance of considering patient perspectives, and there was a strong preference for oral administration. The findings from this simulation could help optimize trial design of future DME clinical trials.

Abstract No.: 200192
Panel No.: APVRS-030
Peripherin-2 (PRPH2)-Associated Retinal Degeneration (RD) in a Southeast Asian Population: A Common Cause of Macular Dystrophy and Retinitis Pigmentosa (RP)
*First Author: Beau **FENNER***
*Co-Author(s): Yasmin **BYLSTRA**, Choi Mun **CHAN**, Yi Hui **KOH**, Weng Khong **LIM**, Ranjana **MATHUR**, Charles **ONG**, Mathieu **QUINODOZ**, Carlo **RIVOLTA**, Tien-en **TAN**, Rachael **TANG***

Purpose: This study is the first comprehensive investigation aimed at characterizing the clinical and genetic profiles of PRPH2-associated RD in a Southeast Asian population. It aimed to identify genetic variants and highlight phenotypic diversity of RD, providing critical insights into disease presentation and progression.

Methods: A total of 600 families with inherited retinal disease were genotyped using whole exome sequencing and targeted gene panel testing. Among these, 26 families (4.3%) with PRPH2-associated RD were identified. Clinical data, including phenotype and age of symptom onset and presentation, were collected for 30 individuals from these families. Multimodal retinal imaging, psychometric testing, and perimetry outcomes were analyzed.

Results: PRPH2-associated RD demonstrated significant phenotypic heterogeneity. Thirteen probands exhibited a rod-cone dystrophy or RP phenotype, while 17 probands presented with macular dystrophy subtypes, including central areolar choroidal dystrophy and pattern or fleck dystrophy. The most common variant for macular dystrophy was c.514C>T (p.R172W), while c.533A>G (p.Q178R) was the most common for RP patients. The median age at symptom onset was 46 years for RP and 50 years for macular dystrophy, with presentation

occurring at median ages of 46 and 51 years, respectively.

Conclusions: PRPH2-associated RD in a Southeast Asian population encompasses a broad spectrum of phenotypes, including RP and diverse macular dystrophies. The presence of recurrent variants with varying phenotypic presentations highlights the importance of genetic analysis in guiding diagnosis and personalized management. These findings enhance understanding of the natural history of PRPH2-related diseases and have significant implications for future therapeutic interventions.

Abstract No.: 200944
Panel No.: APVRS-037
Phenotypic Spectrum and Genotype–Phenotype Correlation of CERKL Variants in South Indian Patients With Inherited Retinal Dystrophies (IRDs)

*First Author: Anuprita **GHOSH***
*Co-Author(s): Poornachandra **B**, Arka **S GHOSH**, Chitra **GOPINATH**, Gaurav **MALWE**, Deepika **C PARAMESWARAPPA***

Purpose: To characterize the clinical and molecular features of CERKL gene mutations in South Indian patients with IRDs and assess genotype–phenotype correlation.

Methods: A retrospective cohort study at a tertiary eye care center. Nine patients with CERKL mutations were identified from a cohort of IRD patients. Comprehensive evaluation included visual acuity, fundus examination, autofluorescence imaging, spectral-domain optical coherence tomography (SDOCT), and electroretinography (ERG). Whole exome sequencing was performed to identify variants. Functional studies in HEK293T cells evaluated the impact of selected mutations. Genotype–phenotype correlation was classified as correlating, noncorrelating, or unresolved.

Results: Nine patients (male:female = 7:2; mean age: 24.2 ± 7.7 years) harbored pathogenic CERKL variants. Diagnoses included retinitis pigmentosa (n = 4), macular dystrophy (n = 3), and Stargardt-like disease (n = 2). Visual acuity ranged from 6/6 to 6/48. Fundus and OCT findings showed variable macular atrophy, loss of ellipsoid and interdigitation zones. ERG demonstrated reduced scotopic and photopic responses. Eight patients had deletion variants; one had a novel missense variant. Functional assays confirmed pathogenicity in selected variants. Genotype–phenotype correlation was consistent in six cases; three remained inconclusive due to overlapping clinical features.

Conclusions: This study expands the phenotypic and genotypic spectrum of CERKL-associated IRDs in the Indian population. It highlights the diagnostic value of integrated molecular and imaging approaches, crucial for personalized care in the era of gene-targeted therapies.

Abstract No.: 200551
Panel No.: APVRS-040
Predictors of Favorable One-Year Visual Outcome in Central-Involving Submacular Hemorrhage (SMH) Secondary to Neovascular Age-Related Macular Degeneration (nAMD)

*First Author: Chui Ming Gemmy **CHEUNG***
*Co-Author(s): Mark **CHENG**, Yu Jeat **CHONG**, Lisa **GEORGE**, Noa **GILEAD GILHAR**, Wataru **KIKUSHIMA**, Mohamed **SHERIF***

Purpose: To identify the clinical and imaging predictors of visual recovery at 12 months in patients with fovea-involving SMH due to nAMD.

Methods: In a prospective cohort study of Asian patients with nAMD and polypoidal choroidal vasculopathy (PCV) recruited between January 1, 2016 and July 1, 2024, eyes with fresh SMH ≥1 disc diameter involving the foveal center were evaluated. All patients received treatment per the standard of care. Logistic regression was used to evaluate predictors of good visual outcome (best-corrected visual acuity [BCVA] ≥6/12).

Results: Among 487 treatment-naïve nAMD cases, 78 eyes met the inclusion criteria. The mean (standard deviation [SD]) age was 71.4 (9.59) years, and 58 (74.4%) were male. The mean SMH size was 18.92 (22.56) mm^2; 47

eyes (60.3%) had subretinal hemorrhage, and 31 (39.7%) had sub–retinal pigment epithelium involvement. The most common macular neovascularization subtype was polypoidal choroidal vasculopathy (57 eyes, 73.1%), followed by type 1 (12 eyes, 15.4%). Treatment included anti–vascular endothelial growth factor injections monotherapy (91%), combination with photodynamic therapy (7.7%), and pneumatic displacement (2.6%). The baseline BCVA was 1.05 (0.68) logMAR. At 12 months, BCVA was available for 70 eyes, with a mean of 0.68 (0.62) logMAR. Twenty-four eyes (34.3%) achieved BCVA ≥6/12. Independent predictors of good vision included younger age (odds ratio [OR] = 0.41, P < 0.01), better baseline BCVA (OR = 0.40, P = 0.01), greater subfoveal choroidal thickness (OR = 2.32, P = 0.01), and lower central pigment epithelial detachment height at month 3 (OR = 0.52, P < 0.05).

Conclusions: Better outcome prediction may improve communication, support decision-making, and guide expectations in nAMD-associated SMH.

Abstract No.: 200844
Panel No.: APVRS-025
Prevalence and Characteristics of Reticular Pseudodrusen (RPD) in Neovascular Age-Related Macular Degeneration (nAMD) in an Asian Population
*First Author: Mohamed **SHERIF***
*Co-Author(s): Chui Ming Gemmy **CHEUNG**, Lisa Maria **GEORGE**, Noa **GILEAD GILHAR**, Zehua **JIANG**, Wataru **KIKUSHIMA**, Chenxi **ZHANG***

Purpose: To investigate the prevalence and characteristics of RPD in an Asian cohort with nAMD.

Methods: Patients presenting with treatment-naïve unilateral nAMD who enrolled into the Asian AMD phenotyping study between 2015 and 2024 were reviewed. All patients underwent protocolized imaging which included color fundus photography, spectral-domain optical coherence tomography (SDOCT), fluorescein and indocyanine green angiography. Images were evaluated for drusen and RPD was considered present based on SDOCT. Patients with ungradable eyes due to extensive neovascular changes or poor image qualities were excluded. Baseline characteristics of patients with RPD were compared to those without RPD.

Results: Among 390 eligible patients (780 eyes), RPD was found in 75 eyes in 56 patients (9.6% per eye, 14.4% per patient). Patients with RPD were older and had a relatively higher proportion of females compared to those without RPD (P < 0.0001 and P = 0.07, respectively). Eyes with RPD showed thinner choroidal thickness (P < 0.0001), more frequent coexisting soft drusen or cuticular drusen (P < 0.0001 and P < 0.0001, respectively), and higher prevalence of type 3 macular neovascularization (P < 0.0001) compared to those without RPD.

Conclusions: This is one of the largest series evaluating the prevalence of RPD in late AMD in Asian population. The characteristics of patients and eyes with RPD were consistent with previously reports.

Abstract No.: 200299
Panel No.: APVRS-059
Prevalence and Risk Factors of Undiagnosed Diabetic Retinopathy (DR): The Tianjin Diabetic Retinopathy Screening Cohort Study (TDRSCS)
*First Author: Han **BO***
*Co-Author(s): Liying **HU**, Juping **LIU***

Purpose: To determine the prevalence and risk factors of undiagnosed DR, in patients with type 2 diabetes mellitus (T2DM) in Northern China.

Methods: A total of 4090 participants from the TDRSCS were enrolled. All participants underwent a questionnaire survey, physical examination, and non-mydriatic fundus examination. Logistic regression was used to identify clinical and sociodemographic factors associated with undiagnosed DR. Subgroup analyses were performed based on the best-corrected visual acuity (BCVA) of the worse-seeing eye and the presence of

vision-threatening DR (VTDR). Multiple testing correction was applied using the Benjamini-Hochberg method.

Results: Up to 94.1% of participants with DR were previously undiagnosed. Adjusted multivariable logistic regression analysis demonstrated that a higher number of comorbid ocular diseases (odds ratio [OR] 0.33, 95% confidence interval [CI]: 0.27–0.40), a longer duration of diabetes (OR 0.96, 95% CI: 0.94–0.98), and advanced stages of severe non-proliferative diabetic retinopathy (NPDR) (OR 0.33, 95% CI: 0.22–0.50) or proliferative diabetic retinopathy (PDR) (OR 0.22, 95% CI: 0.10–0.48) were significantly associated with a decreased risk of undiagnosed DR. Denying a history of hyperlipidemia (OR 2.03, 95% CI: 1.47–2.81), denying a history of renal disease (OR 1.89, 95% CI: 1.24–2.87), or being unaware of whether they had renal disease (OR 2.96, 95% CI: 1.46–6.01) were associated with an elevated risk of undiagnosed DR. However, this association disappeared in the blindness subgroup.

Conclusions: A substantial proportion of DR patients remain undiagnosed. It is crucial to identify the risk factors associated with undiagnosed DR in order to achieve earlier disease detection and prevent avoidable vision loss.

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Abstract No.: 200385
Panel No.: APVRS-022
Real-World Outcomes of Anti–Vascular Endothelial Growth Factor (Anti-VEGF) Agents in Treating Macular Edema Secondary to Central Retinal Vein Occlusion (CRVO): A Comparison of Treat-and-Extend (T&E) and Extended Pro Re Nata (PRN) Regimens

*First Author: De-kuang **HWANG***
*Co-Author(s): Chia-jen **CHANG**, Xin-yuan **CHEN**, Yuan-shao **CHENG**, Shih-chao **FENG**, Hsuan-en **HUANG**, Wen-jung **LO***

Purpose: To compare real-world outcomes of T&E versus extended PRN regimens for macular edema secondary to CRVO under Taiwan's National Health Insurance (NHI) reimbursement constraints.

Methods: This retrospective study included treatment-naïve CRVO patients at Taichung Veterans General Hospital from 2019 to 2022. All patients received three initial monthly anti-VEGF injections, followed by a T&E regimen (with interval extensions based on disease activity) or an extended PRN regimen (retreatment only for edema confirmed by optical coherence tomography). Both regimens were administered in accordance with the NHI policy, which reimburses up to seven injections per eye; any additional injections required out-of-pocket payment by the patient. The primary outcome was best-corrected visual acuity (BCVA) at 18 months. Secondary outcomes included central macular thickness (CMT) and analysis of prognostic factors.

Results: Fifty-six eyes (18 T&E, 38 PRN) were analyzed. Baseline characteristics were similar. At 18 months, the T&E group had greater BCVA improvement (logMAR 1.04 ± 0.59 to 0.61 ± 0.52, P = 0.002) versus PRN (0.95 ± 0.56 to 0.82 ± 0.75, P = 0.125). Both groups achieved significant CMT reduction, with more injections in T&E. Baseline outer retinal edema and intact external limiting membrane predicted better CMT reduction.

Conclusions: Both regimens effectively reduced macular edema and stabilized vision in CRVO patients, but the T&E regimen resulted in significantly greater visual improvement and CMT reduction, with more frequent injections. Baseline outer retinal edema and external limiting membrane integrity were favorable prognostic indicators.

Abstract No.: 200167
Panel No.: APVRS-042
Role of Oral Methylprednisolone in Vogt-Koyanagi-Harada (VKH) Not Responding to Oral Prednisolone

*First Author: Dhruv **GOYAL***
*Co-Author(s): Megha **GULATI**, Akshi **SHARMA***

Purpose: To assess the role of oral methylprednisolone in VKH not responding to oral prednisolone.

Methods: Two patients, after noting complete history and detailed examination, were diagnosed with acute VKH and started on tablet prednisolone 1 mg/kg body weight. Seeing no response on follow-up, local steroids in the form of intravitreal triamcinolone acetonide 2 mg/0.05 ml and transseptal triamcinolone 40 mg/1 ml were injected. However, on observing worsening or no improvement, they were shifted to table methylprednisolone 16 mg BD.

Results: On two-weekly follow-up, both patients showed dramatic improvement in visual acuity, along with resolution of subretinal fluid and retinal pigment epithelium undulations. Methylprednisolone was tapered on a two-weekly basis.

Conclusions: Oral methylprednisolone led to the resolution of VKH in patients not responding to oral prednisolone. It can be used as an alternative to steroid-sparing agents, such as cyclophosphamide and rituximab. There has been no study reporting the role of oral methylprednisolone in VKH yet.

Abstract No.: 200796
Panel No.: APVRS-036
Seasonal Variation of Rhegmatogenous Retinal Detachment (RRD)

First Author: Sunny Chi Lik ***AU***
Co-Author(s): Yui Yan Veronica ***LI***

Purpose: To discuss the current literature on the seasonal variation of RRD, and to evaluate the association with environmental factors: temperature, humidity, atmospheric pressure, sunlight exposure, and solar radiation.

Methods: A literature review was conducted via PubMed on July 2, 2025. The seasonal pattern observed and whether there was a statistically significant association with predefined climatological factors were noted.

Results: Fifteen studies with a total of 7,271,281 eyes were included. Eleven studies noted a seasonal variation, of which 63.6% observed a seasonal predilection in the warmer months, 9.1% noted a lower incidence, and 27.3% did not specify the pattern. Three studies concluded no seasonal variation, while one did not comment. Some proposed variation in such findings to be possibly related to geographical location, but such a pattern was not elicited from the studies included. With the above premise, the role of environmental factors was examined. 87.5% of studies focusing on the effect of environmental factors evaluated for temperature, 75% evaluated for sun hours, and 50% evaluated for relative humidity. The least discussed factor, solar radiation, was included in 12.5% but showed a positive correlation. For most climatological factors, the association with RRD remains controversial. Lifestyle factors such as increased outdoor activity in warmer weather, indirectly linking climatological factors and RRD, likely play a role.

Conclusions: A seasonal variation and association with climatological factors is highly probable. Understanding how exactly these factors interact with RRD requires a larger study with primary data pooled globally and can help inform preventive strategies.

Abstract No.: 200197
Panel No.: APVRS-048
The Clot Conundrum – Managing Submacular Hemorrhage Without Tissue Plasminogen Activator (tPA): A Case Series

First Author: Supriya ***DABIR***
Co-Author(s): Arthi ***M****, Mohan* ***RAJAN***

Purpose: To present a case series demonstrating successful anatomical and functional outcomes in patients with submacular hemorrhage managed without the use of tPA.

Methods: This case series includes three patients with submacular hemorrhage secondary to varying etiologies (two cases secondary to polypoidal choroidal vasculopathy [PCV], one post-traumatic) managed successfully using intravitreal anti–vascular endothelial growth factor (anti-VEGF) agents and/or gas injection/vitrectomy.

Results: Case 1 involves a 67-year-old female diagnosed with PCV, who was managed with anti-VEGF injections of aflibercept and brolucizumab alone. Case 2 features a 62-year-old female with a post-traumatic condition, managed with anti-VEGF injections of bevacizumab in conjunction with vitrectomy. Lastly, Case 3 presents a 55-year-old female with PCV, who was treated with anti-VEGF brolucizumab alongside gas injections.

Conclusions: Submacular hemorrhage due to different etiologies can be managed successfully with anti-VEGF combined with pneumatic displacement and/or vitrectomy without tPA. This may offer a safer and cost-effective option for patients with submacular hemorrhage.

Abstract No.: 200209
Panel No.: APVRS-046
Vogt-Koyanagi-Harada (VKH) Syndrome in Pregnancy: A Rare Case Report

First Author: Omar ***JAFARULLAH***
Co-Author(s): Md Anwarul ***AZIM****, Md.Mominul* ***ISLAM***

Purpose: To report a rare case of VKH syndrome during pregnancy, highlighting diagnostic challenges and management

strategies to ensure favorable maternal and fetal outcomes.

Methods: A 26-year-old woman at 25 weeks of gestation presented with a one-month history of bilateral rapid vision loss, headache, and eye pain. Detailed clinical, slit-lamp ophthalmic examination, and imaging studies were conducted to establish the diagnosis and guide treatment.

Results: Initial visual acuity was 1.5/60 in the right eye and 2/60 in the left eye. Slit-lamp examination revealed bilateral pan-uveitis with intraocular pressure of 4 mmHg in both eyes. Fundus examination showed exudative retinal detachment with choroidal detachment. Optical coherence tomography demonstrated extensive subretinal fluid involving the macula. B-scan ultrasonography confirmed exudative retinal detachment with choroidal thickening. Fundus fluorescein angiography was deferred due to pregnancy. A clinical diagnosis of VKH was made. Initial treatment with oral corticosteroids showed limited improvement. Following obstetric consultation, intravenous methylprednisolone therapy was initiated, leading to significant visual improvement. After three weeks, visual acuity improved to 6/24 in both eyes, and after one month, it was 6/9 in the left eye and 6/24 in the right eye. The patient subsequently had a normal vaginal delivery of a healthy baby.

Conclusions: VKH syndrome during pregnancy is rare and poses diagnostic and therapeutic challenges. Prompt recognition and a multidisciplinary approach, including the judicious use of systemic corticosteroids, can lead to favorable visual and obstetric outcomes.

Retina (Surgical)

Abstract No.: 200646
Panel No.: APVRS-053
240 Band Encirclage, External Drainage, Saline Injection by Transscleral Route and Vitrectomy (BEST VITRECTOMY) for Chronic Retinal Detachment (RD) With Severe Proliferative Vitreoretinopathy (PVR) Changes

*First Author: Veer **SINGH***
*Co-Author(s): Pranshu **GOEL**, Jayant **KUMAR**, Shishir **VERGHESE***

Purpose: To evaluate a novel surgical technique combining encirclage, external subretinal fluid (SRF) drainage, and hydro-separation of membranes based on Pascal's law, in improving outcomes of chronic rhegmatogenous retinal detachment (RRD) with severe PVR.

Methods: This retrospective study included 46 eyes with chronic RRD and PVR ≥ grade C6, operated by a single surgeon between January 2023 and March 2024. After 360-degree peritomy and 240 band encirclage, SRF was drained externally using a 26-gauge needle, inducing hypotony. This was followed by mechanical outward traction on all four recti muscles and brisk pars plana injection of balanced salt solution. The technique, inspired by Pascal's law, aimed to achieve uniform hydro-separation of circumferential membranes, easing their dissection during standard 25-gauge vitrectomy. Exudative RD, retinal vein occlusion, choroidal neovascular membrane, or prior vitreoretinal surgery were excluded.

Results: Single-surgery anatomical success was achieved in 82.6% (38/46) of cases. Visual acuity improved in 95.7% (44/46) of eyes, with a mean gain of logMAR 1.01. Final visual acuity ranged from logMAR 2.7 to 0.3, with 69.6% attaining ≥ logMAR 0.8. Silicone oil removal was done in 47.8%. Redetachment occurred in 6.52%, achieving successful reattachment with resurgery, while 4.34% (2/46) eyes showed no anatomical or visual improvement.

Conclusions: This technique utilizing Pascal's law is a valuable adjunct in managing chronic

RRD with advanced PVR, showing promising anatomical and functional outcomes. The success rates noted are higher than many previous studies. Larger, prospective studies needed to validate its superiority over conventional techniques.

Abstract No.: 200348
Panel No.: APVRS-057
Aggressive Fluid-Air Exchange (FAE) for Retinal Artery Occlusion: Identifying Candidates for Vitrectomy in Central Artery Occlusion (CRAO)

First Author: Praneet ***TELUKUNTA***
Co-Author(s): Brijesh ***TAKKAR***

Purpose: To assess visual and anatomical outcomes following vitrectomy with aggressive FAE in eyes with CRAO, and to identify clinical and imaging associates for favorable response to surgical intervention in CRAO.

Methods: This is a retrospective study. Eyes with CRAO operated by a single surgeon and presenting within two weeks were included. Eyes with signs of inflammatory disorders, no perception of light, and concomitant or current orbital disease were excluded. Preoperative best-corrected visual acuity, fundus findings, and prefusion on optical coherence tomography angiography (OCTA) was noted. Vitrectomy, aggressive FAE, and internal limiting membrane (ILM) peeling were the steps performed, and signs of retinal reperfusion during surgery were noted. Visual improvement was defined as an improvement in at least two lines of distance visual acuity within one month of the surgery, and factors associated with visual improvement were assessed.

Results: The mean duration of CRAO in 13 eyes included was 125 hours. Visual acuity improved in 7 of 13 eyes (53.8%). Presence of emboli (2/2), surgery within 48 hours of CRAO (3/5), ILM peeling (5/10), and intraoperative signs of reperfusion (2/4) were associated with visual improvement. Postoperative OCTA demonstrated increased perfusion in all eyes which gained vision. Reperfusion emerged as an associate of visual improvement.

Conclusions: Vitrectomy coupled with aggressive FAE has potential visual benefits in selected eyes with CRAO, especially when retinal perfusion is noted to enhance. Randomized controlled trials are needed to ascertain our findings.

Abstract No.: 200474
Panel No.: APVRS-054
Anatomical and Functional Outcomes of Retinal Detachment (RD) Surgery in Patients With Oculocutaneous Albinism (OA)

First Author: Vishal ***RAVAL***
Co-Author(s): Prithvi ***NAVEEN***

Purpose: This study aimed to report the surgical and visual outcomes of RD surgery in patients with OA.

Methods: A retrospective analysis of seven eyes from six patients was performed.

Results: The mean patient age was 41 (range, 20–75) years, and the average duration of vision loss was 32 days. Nystagmus was present in six (86%) of seven eyes. Preoperative examination revealed subtotal RD in four eyes (57%), quadrantic RD in two eyes (29%), and total RD in one eye (14%). Macula was involved in five of seven eyes (72%). Of seven eyes, two eyes were treated with scleral buckling, three eyes with pars plana vitrectomy (PPV) with silicone oil tamponade and two eyes with combination of belt buckle and PPV. In the PPV group, retinopexy was performed using endolaser (two eyes), cryopexy (two eyes), or a combination (one eye). Of the five eyes with PPV, three (43%) experienced redetachment under oil, requiring repeat surgery. During subsequent follow-up, two eyes underwent silicone oil removal whereas three eyes required cataract surgery. At the final follow-up (mean, 78 months; range, 5-156 months), retinal reattachment was achieved in all eyes (100%). The mean final best-corrected visual acuity improved from 2.3 to 1.70 logMAR, with a mean gain of 0.6 logMAR.

Conclusions: Despite multiple interventions, the anatomical and functional outcomes of RD surgery are good in patients with OA,

with a primary focus on optimizing adequate retinopexy due to reduced melanin pigment in retinal pigment epithelium.

Abstract No.: 201152
Panel No.: APVRS-050
Association between Optical Coherence Tomography (OCT)–Based Staging and Postoperative Visual Outcomes in Macula-Off Rhegmatogenous Retinal Detachment (RRD)

*First Author: Fumi **GOMI***
*Co-Author(s): Hisashi **FUKUYAMA**, Naoki **KIMURA**, Seiya **SAITO**, Takaki **SATO***

Purpose: To evaluate the association between preoperative OCT-based morphologic staging and postoperative visual outcomes, including metamorphopsia and aniseikonia, in eyes with macula-off RRD.

Methods: This retrospective study included patients undergoing primary vitrectomy for macula-off RRD between October 2016 and March 2024. Visual outcomes, including logMAR best-corrected visual acuity (BCVA), metamorphopsia, and aniseikonia, were assessed at six months postoperatively. Preoperative OCT images were classified into stages 1-5 based on the morphologic macula-off staging (Ophthalmology Retina, 2023). Metamorphopsia was quantified using M-CHARTS, and aniseikonia was assessed with New Aniseikonia Test, with the score defined as the mean of vertical and horizontal measurements. Trends across stages were assessed using the Jonckheere–Terpstra test.

Results: A total of 96 eyes included: no stage 1 cases, 8 in stage 2, 29 in stage 3a, 47 in stage 3b, 10 in stage 4, and 2 in stage 5. At six months postoperatively, the mean logMAR BCVA for stages 2, 3a, 3b, 4, and 5 was -0.07 ± 0.03, 0.01 ± 0.10, 0.10 ± 0.19, 0.10 ± 0.14, and 0.55 ± 0.21, respectively. The mean metamorphopsia scores were 0.31 ± 0.29, 0.23 ± 0.29, 0.37 ± 0.34, 0.58 ± 0.47, and 1.75 ± 0.35, respectively. The mean aniseikonia scores were -0.31 ± 2.84, -0.88 ± 1.59, -2.28 ± 2.93, -3.30 ± 1.96, and -2.75 ± 3.89, respectively. Higher preoperative stage was significantly associated with poorer logMAR BCVA ($P < 0.001$), greater metamorphopsia ($P = 0.004$), and more severe micropsia ($P < 0.001$).

Conclusions: In macula-off RRD, a more advanced preoperative OCT morphologic stage was associated with poorer postoperative visual acuity, more severe metamorphopsia, and aniseikonia.

Abstract No.: 201189
Panel No.: APVRS-055
Fibrin Glue-Assisted Hemostasis for Persistent Optic Disc Bleeding During Vitreoretinal Surgeries

*First Author: Saarang **HANSRAJ***
*Co-Author(s): Brijesh **TAKKAR**, Mudit **TYAGI***

Purpose: Persistent optic disc bleeding during pars plana vitrectomy can be difficult to manage. These bleeders are not amenable to endodiathermy and can often result in postoperative vitreous cavity hemorrhage (POVCH). This study aims to explore the use of fibrin glue as a novel agent to achieve hemostasis in such cases of intractable optic disc bleeding.

Methods: A prospective Interventional case series of patients with vitreous hemorrhage (VH) or tractional retinal detachment (TRD) where fibrin glue was used intraoperatively for achieving hemostasis. All the patients were followed up for six months.

Results: A total of 14 eyes of 14 patients were included. The mean age was 52 years. Surgery was performed in 10 eyes (71.4%) for VH and 4 eyes (28.6%) for TRD. The median best-corrected visual acuity improved from 1.33 logMAR (20/428 to 1.10 logMAR (20/250) ($P = 0.002$, Wilcoxon signed-rank test) at the end of one week and to 0.35 logMAR (20/45) at one month. POVCH was noted to occur in only one eye. Three eyes developed an epiretinal membrane. No cases of intraocular inflammation were noted after the use of fibrin glue.

Conclusions: Fibrin glue coagulum can provide an adequate sealing effect that prevents persistent ooze from the disc bleeders. This technique can be extremely beneficial in the

management of intractable bleeders during vitrectomy and can provide early visual rehabilitation and avoid the incidence of postoperative vitreous cavity hemorrhage.

Abstract No.: 201010
Panel No.: APVRS-049
In Vivo Fluidic Analysis of Triamcinolone-Assisted Vitrectomy Using Different Small-Gauge Vitrectors and Cutting Speeds

*First Author: Miranda Chun-ya **KANG***
*Co-Author(s): Kuan-jen **CHEN**, Yih-shiou **HWANG**, Eugene Yu-chuan **KANG**, Laura **LIU**, Chieh-hung **YEN***

Purpose: To evaluate intraoperative fluid dynamics in triamcinolone-assisted pars plana vitrectomy (PPV) using different small-gauge vitrectors (23-gauge vs. 25-gauge) and cutting speeds (7500 vs. 10000 cuts per minute).

Methods: In this prospective, randomized study, eight eyes from eight patients undergoing PPV for macular or retinal diseases were randomly assigned to either a 23-gauge 7500 cuts per minute (23G 7.5k) or a 25-gauge 10,000 cuts per minute system (25G 10k), both performed with the Alcon CONSTELLATION Vision System. Diluted triamcinolone acetonide was injected to visualize vitreous flow, and high-resolution intraoperative videos were recorded using the Zeiss Artevo 800 microscope. Dense optical flow analysis was used to measure mean vector length (pixels/field) under a constant vacuum (300 mmHg). Secondary outcomes included surgical time and intraoperative events. Comparisons between different vitrectomy systems, gauge sizes, and cutting speeds were performed using independent t-tests and regression analysis.

Results: Four eyes underwent vitrectomy using the 23G 7.5k system, and four eyes underwent the 25G 10k system. The mean vector length for the 25G group was 9.54 ± 0.84 pixels/field, which was significantly lower than 11.20 ± 1.25 pixels/field in the 23G group ($P < 0.01$). The average median vector length was 8.51 ± 0.83 pixels in the 25G group and 10.40 ± 1.85 pixels in the 23G group. Surgical times were comparable, and no intraoperative complications occurred.

Conclusions: Smaller-gauge vitrectors and faster cutting speeds may offer improved intraoperative fluid stability during small-gauge vitrectomy. These findings have implications for optimizing vitrectomy settings to enhance surgical safety and efficiency.

Abstract No.: 200341
Panel No.: APVRS-058
Minimally Invasive Vitrectomy With Ngenuity Visualization System for Retinitis Pigmentosa (RP) Patient

*First Author: Takayuki **BABA***
*Co-Author(s): Ryutaro **AKIBA**, Yasuhiro **MIKAMI**, Gen **MIURA***

Purpose: We previously reported two cases with RP that developed severe retinal atrophy long after vitreoretinal surgery, and possible cause of the atrophy is the endoillumination resulting in light-induced retinal damage which in turn accelerated the macular degeneration in a long term. The aim of this case report is to indicate the effectiveness and safety of low illuminance par plana vitrectomy (PPV) with NGENUITY® 3D Visualization System (Alcon, Fort Worth, USA) for epiretinal membrane (ERM) in a patient of RP.

Methods: The case was a 68-year-old male patient of RP and right ERM. We performed 25-gauge PPV, ERM removal and internal limiting membrane peeling with the endoillumination level reduced to 10%, while visual quality was maintained by optimizing the brightness and contrast of the 3D display.

Results: The surgery was completed without any complications. The ellipsoid zone of the central fovea observed by optical coherence tomography remained mostly continuous postsurgery, and the central foveal thickness decreased from 318 μm to 291 μm. The patient's preoperative decimal visual acuity of 0.5 improved to 0.8 four months after the surgery. Fundus autofluorescence showed no significant change.

Conclusions: The short-term outcome suggests that low endoillumination vitrectomy might be beneficial for patients with RP to reduce the retinal phototoxicity. It will be required to keep following up to reveal the long-term effect.

Abstract No.: 200174
Panel No.: APVRS-056
Preoperative Optical Coherence Tomography (OCT)–Based Classification System Optimizes Outcomes in Epiretinal Membrane (ERM) Surgery

First Author: Vinit ***MAHAJAN***
Co-Author(s): David ***ALMEIDA***

Purpose: To evaluate OCT-guided ERM surgery using the Preoperative Retinal Evaluation System for Surgery (PRESS) classification method.

Methods: This is a retrospective, comparative, consecutive interventional case series — a masked study comparing 137 eyes undergoing PRESS-guided ERM surgery with 71 consecutive control cases undergoing conventional surgery without OCT guidance.

Results: The mean operative time was reduced by 28% (19.6 vs. 25.1 minutes, $P < 0.001$). Visual improvement was greater by five Early Treatment of Diabetic Retinopathy Study (ETDRS) letters at three months in the PRESS-guided group (16.2 vs. 11.2 letters, $P < 0.01$). First-attempt grasp success varied significantly by PRESS class: Type 1 (95.3%), Type 2 (82.1%), Type 3 (71.4%), and Type 4 (81.8%) ($P < 0.01$). The mean operative time was reduced by 28% (19.6 vs. 25.1 minutes, $P < 0.001$). Visual improvement was greater by five ETDRS letters at three months in the PRESS-guided group (16.2 vs. 11.2 letters, $P < 0.01$).

Conclusions: Using OCT guidance to identify SuMS, the PRESS classification system provides a practical framework for surgical planning in ERM cases. This image-guided approach helps stratify surgical risk, identify optimal membrane engagement points, increase efficiency, and guide technique selection, potentially improving success rates with fewer complications.

Abstract No.: 200340
Panel No.: APVRS-052
Revolutionary Staged Vitreoretinal Surgery Using 80/20 Perfluorocarbon-Silicone Oil Tamponade: Achieving 94.7% Success in Complex Retinal Detachments While Eliminating Positioning Requirements and Perfluorocarbon Liquid (PFCL) Toxicity

First Author: Shweta ***SINGH***
Co-Author(s): Gauri ***KHARE****, Obuli Ramachandran* ***NANDHAKUMAR***

Purpose: To evaluate a breakthrough staged technique combining 80% PFCL with 20% silicone oil tamponade that addresses two major challenges in complex retinal detachment surgery: PFCL toxicity and patient positioning compliance.

Methods: A prospective case series of 38 consecutive complex retinal detachments (giant tears, proliferative vitreoretinopathy [PVR] grade B/C, inferior breaks) underwent innovative two-stage surgery. Stage 1: 25-gauge vitrectomy with 80/20 PFCL-silicone oil mixture providing superior density tamponade (1.55 g/cm^3) while creating protective barrier against direct PFCL-retinal contact. Stage 2: PFCL removal at 14 days with complete silicone oil fill. The primary outcome is anatomical success. The secondary outcomes include visual improvement, complications, and positioning compliance.

Results: The mean age of the participants was 46.9 ± 17.9 years, and the cases included a high complexity level (78.9% as PVR grade B/C, 92.1% as macula-off). An outstanding primary anatomical success rate was achieved in 36/38 eyes (94.7%; 95%CI: 82.3-99.4%). The final success rate reached 100%. There was a remarkable visual improvement from 2.07 ± 0.65 to 0.70 ± 0.45 logMAR ($P < 0.001$). No PFCL-related toxicity was observed. A revolutionary finding was that patient compliance with comfortable supine positioning was 100%, compared to compliance rates of only 30-70% reported with traditional gas tamponade. No emergency PFCL removals were required.

Conclusions: This paradigm-shifting technique achieves superior anatomical outcomes while

solving critical limitations of current approaches. The protective silicone oil barrier eliminates PFCL toxicity concerns while enabling patient-friendly supine positioning.

Results: demonstrate this technique's potential to transform complex retinal detachment management, offering surgeons a safer, more effective approach with dramatically improved patient experience. Multicenter validation warranted.

Abstract No.: 200383
Panel No.: APVRS-051
Rhegmatogenous Retinal Detachments (RRD) in Eyes With Keratoprosthesis (KPro): Evaluation of Risk Factors, Anatomical and Functional Outcomes of Treatment (RAFT Study)

*First Author: Vivek **DAVE***
*Co-Author(s): Sayan **BASU**, Khushboo **CHAUHAN**, Rajeev Reddy **PAPPURU**, Swapna **SHANBHAG**, Mudit **TYAGI***

Purpose: To evaluate incidence and risk factors for RRD in patients with KPro, as well as the anatomical and functional outcomes following vitreoretinal surgery for RRD in eyes with KPro.

Methods: A retrospective observational study of patients who underwent KPro implantation (Boston KPro, Auro KPro and LVPEI KPro) at a tertiary eye care institute. Patients with incomplete medical records were excluded. Risk factors assessed for RRD included KPro exchange, aphakia, absence of posterior capsule, retroprosthetic membrane (RPM), wound leak, vitritis, endophthalmitis, and iridectomy. Primary outcomes were incidence and risk factors for RRD; secondary outcomes included anatomical and functional success following RRD surgery.

Results: A total of 385 eyes of 364 patients were included. The mean patient age was 40.9 ± 17.4 years. RRD occurred in 60 eyes (15.58%). Multivariate logistic regression showed absence of posterior capsule ($P = 0.035$), presence of RPM ($P = 0.004$), wound leak ($P < 0.001$), and endophthalmitis ($P = 0.004$) were significantly associated with RRD (model specificity = 0.809, sensitivity = 0.614 and AUC of 0.751). RRD occurred in 21.3% of eyes that underwent KPro exchange, compared to 13.3% without exchange. Of 60 eyes with RRD, 39 (65%) underwent or were scheduled for surgery. In 11 eyes, surgery was abandoned due to extensive proliferative vitreoretinopathy. Anatomical success was achieved in 85% of cases that completed surgery, with significant improvement in best-corrected visual acuity postoperatively ($P = 0.004$).

Conclusions: RRD is a notable complication after KPro, especially in eyes with KPro exchange. Absence of posterior capsule, RPM, wound leak, and endophthalmitis are key risk factors. Preserving the capsule and early surgical intervention can improve outcomes.

PAO

Cataract & Refractive Surgery

Abstract No.: 201387
Panel No.: PAO-001
Scroll sign

First Author: Amber ***BHAYANA***
Co-Author(s): Vinayak ***GADAD****, Priyanka* ***PRASAD***

Purpose: We aim to describe a new sign called "scroll sign" seen due to scrolling of lens capsule of traumatic ruptured lenses with aphakia with absent vitreous attachment.

Methods: 2 cases with traumatic lens rupture were evaluated on slit lamp examination, showed rolling of the lens capsule on it itself, clinically visible as a scroll. The scroll shape was visible on anterior segment optical coherence tomography which also showed no vitreous attachment on the capsule.

Results: Just like the posterior edge of giant retina tear rolls on itself because of absence of any vitreous attachment, and rolling of the posterior capsular margins of posterior capsulorhexis marks the end-point of required anterior vitrectomy in pediatric cataract surgeries, "scroll sign" of the lens capsule signifies no vitreous humor attachment

Conclusions: Scroll sign may be considered a marker while planning secondary intraocular lenses in subjects with post traumatic lens rupture and aphakia, for consideration for requirement of anterior vitrectomy.

Cornea & ED

Abstract No.: 200387
Panel No.: PAO-004
A Single-Masked Comparative Study on the Effectiveness of Commercial Eyelid Cleansers in Patients with Meibomian Gland Dysfunction in a Tertiary Government Hospital

First Author: Francis Dominic ***VILLANGCA***
Co-Author(s): Maricris Lee ***ABULENCIA****, Eleonore* ***IGUBAN***

Purpose: To compare the efficacy of Johnson's Baby Shampoo, Blephagel©, Blephagiene© Eyelid Cleanser, Tea Tree facial wash, and Manuka Honey eye cream in treating patients with meibomian gland dysfunction (MGD) in a tertiary government referral center in the Philippines.

Methods: Thirty-two patients (64 eyes) with symptomatic MGD were enrolled, diagnosed using the Japanese MGD Working Group's criteria. Patients were randomized into five treatment groups, each applying their assigned product as part of a lid scrub regimen for eight weeks. Outcome measures included Ocular Surface Disease Index (OSDI) scores, tear breakup time (TBUT), visual acuity, corneal and conjunctival staining, Schirmer test, and meibomian gland assessment. Statistical analyses included paired t-tests and repeated measures ANOVA with Bonferroni correction.

Results: Significant improvements in visual acuity were seen in the Johnson's Baby Shampoo ($p = 0.024$), Blephagel© ($p = 0.011$), and Manuka Honey ($p = 0.014$) groups. TBUT improved in all groups except Blephagiene©. Corneal and conjunctival staining improved significantly, particularly with Blephagel© and Tea Tree facial wash (both $p = 0.001$). Schirmer 1 test values increased across all groups ($p < 0.05$). Improvements in lid margin staining and meibomian plugging were observed in Johnson's Baby Shampoo and Blephagel© groups. No statistically significant superiority was noted among treatment groups.

Conclusions: All five lid hygiene regimens were effective and safe for MGD treatment. Johnson's Baby Shampoo, Blephagel©, and Tea Tree facial wash showed more consistent improvements in clinical parameters. Blephagiene© and Manuka Honey may be considered effective alternatives.

Abstract No.: 201185
Panel No.: PAO-002
Bilateral Periorbital Lesions as an Atypical Presentation of Monkeypox in an immunocompromised patient

*First Author: Billie Jean **CORDERO***
*Co-Author(s): Hana Vienne **GECOSALA**, Alana Marie **TANDICO***

Purpose: To report a unique case of bilateral periorbital monkeypox lesions in a patient with untreated HIV, initially misdiagnosed as Molluscum contagiosum.

Methods: Design: Case Report

Results: A 29-year-old male with a 6-week history of eyelid swelling and tenderness was initially treated for presumed Molluscum contagiosum. Upon ophthalmologic evaluation, the patient initially had multiple clustered small, smooth umbilicate lesions, surrounding the upper and lower eyelid margin with crusting, matted lashes, follicular reaction, pseudomembranes lower fornices and palpebral conjunctiva, with injected conjunctiva, with clear cornea, no anterior chamber reaction, no flare, clear lens. The patient was then lost to follow up and presented at the emergency department a month later for admission under Internal Medicine service. Systemic examination revealed disseminated vesiculopustular lesions involving the face, trunk, oral mucosa, and genitalia. Polymerase Chain Reaction testing confirmed monkeypox virus (Clade IIb) along with histopathologic biopsy which revealed Epidermal necrosis with viral cytopathic changes suggestive of Monkeypox. The patient was treated with IV antibiotics, antivirals, and supportive care. After two weeks of multidisciplinary management, the patient showed significant exacerbation in periorbital lesions and systemic symptoms. No corneal involvement or vision loss was noted.

Conclusions: This case shows the importance of considering Monkeypox in the differential diagnosis of eyelid lesions in immunocompromised patients. Early recognition, laboratory confirmation, and multidisciplinary treatment are critical to prevent complications and reduce morbidity. It emphasizes the variable and often deceptive nature of Monkeypox in high-risk populations such as those with untreated HIV.

Abstract No.: 200539
Panel No.: PAO-005
Determining Levels of Microbial Contamination of Multi-User Preserved Ophthalmic Drops at an Out-Patient Clinic in a Tertiary Government Hospital in the Philippines

*First Author: Ricardo Tobias **PAPA***
*Co-Author(s): Nexie **LIBRE**, Raymond Nelson **REGALADO***

Purpose: The study aimed to determine the microbial contamination of multi-user preserved ophthalmic drops (POD) used in the Ophthalmology Outpatient Department (OPD) in a Tertiary Level Hospital in the Philippines.

Methods: This study used an experimental, in-vitro study design, with a sampling size of 104 multi-user POD, conducted at the OPD clinic of a Tertiary Level Hospital. Each bottle's dropper tip and residual contents were aseptically swabbed at four intervals—opening (T0), day 3 (T3), day 14 (T14), and day 30 (T30)—with five replicates per timepoint. The inclusion criteria included recently opened POD bottles, while exclusion criteria included POD bottles with broken seals on new bottles, and bottles with missing caps or tips on the day of collection, and control bottles that exhibit contamination during the initial T0 assessment. Samples were then cultured on blood, chocolate, MacConkey, and Sabouraud agar plates and incubated at 37 °C in 5% CO_2 for seven days. Positive cultures would undergo Gram stain and biochemical identification. The Statistical Package for the Social Sciences version 29 was

used to analyze contamination prevalence and tip versus contents comparison.

Results: Following our sampling protocol and culture methods, the study showed that out of 104 samples, no contamination was detected across the duration of their usage in the OPD clinic.

Conclusions: This outcome supports the efficacy of the institution's handling and aseptic protocols. It also shows the effectiveness of preservatives, and proper hygiene in significantly decreasing the contamination rates in multi-user preserved ophthalmic drops.

Abstract No.: 201216
Panel No.: PAO-003
Herpes Simplex Keratitis as a Consideration in Interface Fluid Syndrome Following Small Incision Lenticule Extraction

*First Author: Cristina Erika **ELAZEGUI***
*Co-Author(s): Irwin **CUA***

Purpose: To report a case of presumed herpes simplex virus (HSV) keratitis following small-incision lenticule extraction (SMILE), which subsequently led to interface fluid syndrome (IFS).

Methods: We describe the case of a 31-year-old man who underwent uneventful SMILE surgery and later presented with persistent corneal edema, ultimately diagnosed as IFS secondary to HSV keratitis. Anterior segment findings, visual acuity, refraction, intraocular pressure (IOP), pachymetry values and AS-OCT were documented throughout the clinical course

Results: Two weeks postoperatively, the patient presented with whitish granular material within the SMILE interface in the left eye. A presumptive diagnosis of diffuse lamellar keratitis was made, and topical corticosteroids were started. Although initial improvement was noted, corneal edema recurred within the lenticule interface, accompanied by a decline in visual acuity from 20/25 to 20/100 and an IOP of 40 mmHg. Pressure-induced stromal keratitis (PISK) secondary to steroid use was initially suspected, and IOP-lowering medications were prescribed. At the 6-week follow-up, worsening edema, a 93 µm increase in pachymetry, fine keratic precipitates, and grade 1 anterior chamber cells were observed. A diagnosis of HSV keratitis with secondary IFS was made. The patient was treated with oral acyclovir, topical corticosteroids, and aggressive IOP control, resulting in marked clinical improvement.

Conclusions: HSV keratitis is a potential but underrecognized complication following SMILE. Postoperative corneal interface anatomy may mask classic signs and predispose to secondary IFS in the setting of elevated IOP. Prompt recognition and antiviral therapy are essential to prevent vision-threatening sequelae.

Abstract No.: 201313
Panel No.: PAO-011
IRIDOCORNEAL ENDOTHELIAL SYNDROME: A CASE REPORT OF CHANDLER'S SYNDROME

*First Author: Roel **VILLANUEVA***
*Co-Author(s): Elenor Reina **ALEGRE**, Kristine Anne **FLORECE***

Purpose: To present a case on Chandler's Syndrome because of its diagnostic and therapeutic challenges.

Methods: This is a case of a 38 year-old congenitally mute and deaf female who complains of blurring of vision on the left eye associated with eye redness.

Results: Initial evaluation showed a best corrected visual acuity of 20/30 on the right eye and counting fingers at 4 feet on the left eye. Intraocular pressure was 15 mmHg on both eyes, currently not on any medications. Anterior segment examination showed unremarkable right eye findings, however, on the left eye, the cornea was hazy with superficial neovascularization at the 6 o'clock to 8 o'clock peripheral cornea and generalized bullae formation was observed. On gonioscopy, both eyes revealed an open angle with visualization of the ciliary body band on the right eye, and visualization of scleral spur with no synechiae formation on the left eye. B scan ultrasound

results of the left eye showed minimal vitreous opacities and an attached retina.

Conclusions: A confirmed diagnosis of Chandler's Syndrome was done based on the clinical findings and diagnostics done on the patient. Currently, the patient is being followed up at a tertiary hospital in Metro Manila. The patient is being treated with topical medications of Timolol and Brimonidine, with good control of intraocular pressure. A plan for an Optical Penetrating Keratoplasty with Gonioscopy and Lens Exchange with Posterior Chamber Intraocular Lens Insertion is warranted for the improvement of quality of life.

Abstract No.: 200689
Panel No.: PAO-006
Limbal Stem Cell Transplantation for Unilateral Limbal Dermoid in a Pediatric Filipino Patient with Anisometropic Amblyopia

*First Author: Elizabeth Aileen **GILLER***
*Co-Author(s): Kenneth **LIM***

Purpose: This aims to present a case of a 4 year-old male who presented with an inferotemporally located dome shaped whitish mass with yellowish to brownish center overlying the cornea, limbus, and conjunctiva of the right eye associated with blurring of vision. Moreover, to discuss the clinical, ophthalmological presentation, and management of the case.

Methods: A 4 year old male accompanied by his mother consulted due to a gradually enlarging mass in the right eye of the patient present since birth associated with blurring of vision. Systemic evaluation was generally unremarkable except for bilateral preauricular skin tags noted. On ocular examination, uncorrected visual acuity was 20/70 and 20/25 for right and left eye, respectively. Manifest refraction was done. Parents were advised and excision of mass with limbal stem cell transplantation of the right eye under general anesthesia was performed.

Results: The diagnosis of limbal dermoid was confirmed with the biopsy result of the excised mass. A diagnosis of Goldenhar Syndrome and Anisometropic Amblyopia was also made. Best uncorrected visual acuity for the right eye improved from 20/70 to 20/50 with manifest refraction noted to be +3.25sph = -2.50 cyl x 30°.

Conclusions: This case highlights excision and limbal stem cell transplantation as a management option for limbal dermoid as this potentially promotes faster healing and lessening the impact of mass contributory to corneal astigmatism and further correction of anisometropic amblyopia by refraction correction in the future.

Abstract No.: 200832
Panel No.: PAO-007
Pthirus pubis Infestation of the Eyelashes Causing Unilateral Chronic Blepharoconjunctivitis in an Adult Filipino Male: A Case Report

*First Author: Aubhugn **LABIANO***
*Co-Author(s): Reynaldo Jr. **LUZ**, Erwin **PALISOC***

Purpose: To report a rare case of chronic blepharoconjunctivitis secondary to Phthiriasis palpebrarum or Pthirus pubis infestation

Methods: Descriptive Case study

Results: A 31-year-old male presented with left eyelid swelling, eye pain, and itchiness. The patient reported retrieving an insect from a fallen eyelash. Clinical examination confirmed Pthirus pubis infestation on left eye which led to chronic blepharoconjunctivitis. Treatment involved mechanical removal of the lice and nits using fine forceps followed by lid scrub regimen with topical steroid-antibiotic ointment. Symptoms fully resolved after 2 weeks

Conclusions: Phthiriasis palpebrarum is classified as an STD (Sexually Transmitted Disease). Raising awareness among clinicians and the public can aid in its early detection, timely treatment, and reduced transmission. Further case documentation will enhance understanding of this condition and inform management strategies.

Abstract No.: 201065
Panel No.: PAO-009
SNAKE VENOM OPHTHALMIA CAUSED BY SPITTING BLACK-YELLOW COBRA: A CASE SERIES

*First Author: Renie Boy **DECOSTO***

Purpose: Purpose: Snake venom ophthalmia caused by a spitting elapid cobra is a rare ocular condition that can be vision-threatening if improperly managed. Reports involving African and Asian cobra species showed mild to moderate clinical course without significant sequelae. In the Philippines, this condition remains to be underreported, poorly documented and possibly mismanaged. We report 4 cases of adult patients spat by a threatened black-yellow cobra found from January 2025 to June 2025. Clinical course and management at all levels of care were documented and visual-ocular outcomes were monitored.

Methods: Retrospective Descriptive study

Results: All four (4) cases were seen in less than 5 hours from the incident and presented a variable clinical course. Symptoms include mild to moderate burning eye pain, eye redness, increased lacrimation with an intact vision and intact neurologic status including absence of ptosis. Slit lamp revealed a mild eyelid swelling, mild to moderate conjunctival injection and minimal corneal epithelial erosions. Immediate decontamination by irrigation with 1-2L of normal saline solution (NSS) over 30-60 minutes, followed by instillation with topical antibiotic resulted in symptom relief. No anti-venom was recommended and all patients were discharged improved. Follow-up within 24 hours and 1 week revealed no ocular sequelae.

Conclusions: Snake venom ophthalmia caused by a local black-yellow cobra has a milder course and not vision-threatening. A proper emergency care by immediate decontamination by irrigation with NSS and prophylactic topical antibiotic is the mainstay treatment. Anti-venom is not recommended in an intact ocular surface.

Abstract No.: 201210
Panel No.: PAO-010
Sympathetic ophthalmia following corneal patch graft for corneal perforation secondary to Pediatric blepharokeratoconjunctivitis

*First Author: Ruben **LIM BON SIONG***
*Co-Author(s): Jan Louise **CABRERA**, Bryan Vincent **MESINA**, Bobbie Marie **SANTOS**, George Michael **SOSUAN***

Purpose: This is the first reported case of sympathetic ophthalmia (SO) that developed following a corneal patch graft in the absence of overt postoperative uveal incarceration for a complication of severe pediatric blepharokeratoconjunctivitis (PBKC), a treatable condition that may result in visual morbidity and corneal blindness if not treated promptly and adequately.

Methods: A 14-year-old Asian male presented with recurrent eye redness, pruritus, and blurring of vision of the left eye and was diagnosed with corneal perforation from ruptured descemetocele from PBKC of the left eye. He was treated with antibiotics, underwent a full-thickness corneal patch graft, and discharged well with topical steroids, antibiotics, and cycloplegics and lid scrub regimen with antibiotic-steroid combination ointment. One month post-operation, his visual acuity worsened to hand movement with anterior chamber inflammation, optic disc edema, and retinal detachment of both eyes and was diagnosed with sympathetic ophthalmia. He was given intravenous corticosteroids, which was gradually tapered on subsequent follow-up consults, and was started on immunosuppressants.

Results: Visual acuity improved from hand movement to 20/80 for both eyes, with decrease in anterior and posterior chamber inflammation. However, there was recurrence of inflammation at ten months post-operation from poor adherence with topical corticosteroids and lid scrub regimen.

Conclusions: PBKC is a chronic disease with a wide clinical spectrum. Prompt diagnosis and management is crucial to prevent

severe presentations and visual and systemic morbidities such as SO.

Abstract No.: 200939
Panel No.: PAO-008
Unilateral Interstitial Keratitis in a Case of Congenital Syphilis
*First Author: Paulita Pamela **ASTUDILLO-PANTIG***
*Co-Author(s): Chynna Pearl Tana **BACCAY**, Albert John **BROMEO**, Jeane Haidee **MAH-SADORRA***

Purpose: Congenital syphilis is caused by transmission of Treponema pallidum from mother to fetus, resulting in a myriad of clinical presentations. The most common manifestation is a bilateral interstitial keratitis, although pigmentary retinopathy, uveitis, and secondary glaucoma are also common. We report a rare case of an infant with congenital syphilis who presented with a unilateral corneal opacity.

Methods: Case Report

Results: A 2 month old male born to a mother who tested positive for syphilis during the prenatal period presented with a whitish opacity on the right eye on first day of life associated with skin rashes. Examination showed multiple corneal stromal opacities on the peripheral superotemporal cornea with neovascularization on the right eye. Anterior segment findings on the left eye were unremarkable. Fundoscopy of was unremarkable in both eyes. Diagnostic testing on the infant revealed a positive findings for syphilis. He was diagnosed with congenital syphilis with interstitial keratitis on the right eye. The patient was treated with a course of aqueous crystalline penicillin G and topical corticosteroids which resulted in regression of corneal vessels and scarring of the corneal lesion.

Conclusions: Congenital syphilis is a preventable but potentially vision-threatening condition. Early diagnosis through neonatal screening and maternal history, followed by prompt treatment is vital to reduce infectious and inflammatory sequalae. The rising number of global cases highlight the need for stronger prenatal care and public health efforts.

Glaucoma

Abstract No.: 200419
Panel No.: PAO-013
Clinical Profile and Outcomes of Primary Angle Closure Disease Patients in a Tertiary Philippine Hospital: A Retrospective Cohort Study
*First Author: Nilo Vincent **FLORCRUZ***
*Co-Author(s): Kevin John **SY***

Purpose: Primary angle closure disease (PACD) encompasses 3 stages, with the defining feature of gonioscopic angle closure. The objectives of this study are to determine the demographic and clinical profile of PACD patients in a single institution, and the post-treatment outcomes in terms of visual acuity (VA), intraocular pressure (IOP), and mean deviation (MD) in Humphrey automated perimetry.

Methods: This is a single-center, retrospective study. Medical records of patients diagnosed with PACD from June 2020 to December 2023 were reviewed. Statistical analyses include descriptive statistics, as well as exploratory and post-hoc analyses, and paired t test or Wilcoxon sign rank test to determine differences between groups and intervention outcomes, respectively.

Results: Two-hundred fourteen (214) patients (i.e., 428 eyes) were included in the study. More than half of the eyes were diagnosed with primary angle closure glaucoma (PACG). Most common initial treatments performed were laser peripheral iridotomy, trabeculectomy, medical therapy, and phacoemulsification. Improved VA and decreased IOP trends were observed on succeeding follow-ups; no significant change was seen in initial and final MD in perimetry testing.

Conclusions: PACD mostly affects female and elderly patients. PACG is the most common diagnosis in 5 of 10 eyes, with 6 of 10 PACG eyes classified as severe. The initial treatment choice depends on the PACD stage and patient factors. Visual outcomes have improved or remained stable, and IOP has decreased after intervention. Progression to higher stages is

relatively low in eyes initially diagnosed with primary angle closure suspect or primary angle closure.

Abstract No.: 200378
Panel No.: PAO-012
Pediatric WAGR Patient with Aniridia-Associated Glaucoma
*First Author: Maria Imelda **VELOSO***
*Co-Author(s): Patricia Abigail **LIM***

Purpose: WAGR syndrome is a rare genetic condition marked by Wilms tumor, Aniridia, Genitourinary anomalies, and Retardation of development. Aniridia-associated glaucoma is common in WAGR and often requires surgical management. While case reports from developed countries exist, data from resource-limited settings remain scarce. This report presents a case of a WAGR syndrome patient with aniridia and glaucoma managed surgically in a tertiary government hospital in the Philippines.

Methods: A 1 year and 9-month-old male presented with corneal opacity and a suspected WAGR syndrome diagnosis. Examination revealed bilateral aniridia, left eye glaucoma (IOP 64 mmHg), and right eye with better visual function. The patient had multiple systemic findings consistent with WAGR, including ambiguous genitalia and a renal mass suggestive of Wilms tumor. After initiating topical therapy, patient underwent combined trabeculectomy and trabeculotomy for the left eye. Due to severe corneal opacity, trabeculotomy was performed using tactile feedback and anatomical landmarks. Pediatric anatomical challenges were addressed with adjusted surgical techniques.

Results: Postoperatively, IOP was successfully controlled without signs of buphthalmos or pain. Visual prognosis remained poor due to concurrent corneal abnormalities. One year later, bleb needling with 5-FU was performed due to bleb failure, restoring pressure control. The patient maintained stable IOP two years postoperatively

Conclusions: This case demonstrates that combined trabeculectomy and trabeculotomy can achieve effective IOP control in WAGR patients, even in resource-limited settings. While visual prognosis may remain poor due to other ocular anomalies, surgical management without device assistance remains a viable option in such environments.

Neuro ophthalmology

Abstract No.: 200245
Panel No.: PAO-014
A Case of a Dengue-associated Atypical Optic neuritis in a Tertiary Government Hospital in the Philippines
*First Author: Adrian **BAUTISTA***
*Co-Author(s): Minnette **DAGTA**, Erwin **PALISOC***

Purpose: To present a rare case of dengue-associated atypical optic neuritis in a young adult patient and to highlight the clinical features, diagnostics, and treatment outcomes of this condition observed in a government hospital in the Philippines.

Methods: We present a 25-year-old female with bilateral blurring of vision one week post-dengue recovery. Evaluation included BCVA, color vision, fundus exam, Optical coherence tomography of optic nerve head, perimetry, and Cranial CT scan. She was treated with intravenous methylprednisolone, followed by a tapering course of oral corticosteroids, resulting in significant visual improvement.

Results: Initial BCVA was 20/80 in both eyes, accompanied by macular exudates and Frisen Grade 1 disc edema. Optical coherence tomography revealed cystoid macular edema, subretinal fluid, IS/OS disruption, and peripapillary RNFL thickening that is more pronounced on the left eye. Systemic workup was unremarkable. Visual acuity worsened before IV methylprednisolone was initiated. Following intravenous methylprednisolone, progressive visual improvement was noted, reaching 20/30 bilaterally by Day 5. Discharged on oral steroids, she achieved BCVA 20/25, OU

at 1 week after discharge and 20/20 OD, 20/25 OS at 2 weeks. OCT and visual field testing showed marked improvement, with only mild persistent central depression in the left eye.

Conclusions: This case illustrates the importance of maintaining clinical suspicion for post-viral optic neuritis in dengue patients presenting with visual symptoms. Recognizing this association is key to initiating prompt treatment and preventing permanent visual impairment.

Abstract No.: 200817
Panel No.: PAO-020
A Rare Case of Nine Syndrome: Uncommon Intersection of Ocular and Neurologic Signs

*First Author: Fatina Niña **CALIWAG***
*Co-Author(s): Janice **FERRER BERNANDO**, Lorenz Jacob **MANGAHAS**, Richard **VILLAMOR***

Purpose: This is a case of a 52-year-old female presenting with binocular horizontal diplopia at Ilocos Training and Regional Medical Center. The right eye showed adduction deficit on the left lateral gaze and abducting nystagmus on the right lateral gaze. Whereas, the left eye showed an abduction deficit on the left lateral gaze. Patient also presented with facial asymmetry and right sided weakness. Pertinent history includes hypertension with no history of trauma and infection.

Methods: Basic diagnostics and imaging was done.

Results: Plain Cranial MRI showed T1W/T2W hyperintense signal in the left pontine area, midbrain, capsulo-ganglionic region, indicating acute to subacute hemorrhagic infarct. Confluent T2/FLAIR hyperintensities are also seen in the periventricular and subcortical white matter of both cerebral hemispheres. Patient was co-managed with Neurology team. Neuroprotectants and occlusion patch was given for symptomatic relief of diplopia.

Conclusions: Nine syndrome is a rare clinical entity characterized by the triad of one-and-a-half syndrome, ipsilateral facial nerve palsy, and contralateral hemiparesis or hemi-anesthesia, localizing the lesion to the dorsal paramedian pontine tegmentum. This condition remains exceedingly rare, citing just 14 documented cases in the literature review.

Abstract No.: 200686
Panel No.: PAO-019
Behind the Eye, Beyond the Obvious: A Case of Bilateral Retrobulbar Optic Neuritis in a Pediatric Patient

*First Author: Mark Christian **MAGDALUYO***
*Co-Author(s): Gabriel Louis **MONTALBO***

Purpose: This case highlights a rare presentation of bilateral retrobulbar optic neuritis in a ten-year-old girl, emphasizing the diagnostic and therapeutic challenges when typical signs are absent on fundus examination.

Methods: The patient presented with progressive, painless bilateral vision blurring over six weeks. Prior outpatient refraction showed no improvement, prompting ophthalmology referral. Comprehensive ophthalmologic and neurologic evaluations were performed, including optical coherence tomography of the optic nerve head and macula, visual field testing, and visual evoked potential. Cranial magnetic resonance imaging with contrast and autoimmune and infectious panels were conducted after admission.

Results: Despite a normal fundus appearance and unremarkable neurological findings, visual field examination showed severe bilateral depression affecting the fovea. Visual evoked potential demonstrated delayed latencies, consistent with bilateral optic neuropathies. All laboratory and imaging studies returned normal or non-contributory. The patient was treated with high-dose intravenous corticosteroids, resulting in marked subjective and objective visual improvement by the third day of treatment. Tapering with oral steroids afforded further improvement on the visual acuity and repeat visual field test of both eyes. Aquaporin-4 antibody testing is still pending.

Conclusions: Bilateral retrobulbar optic neuritis in children is uncommon and may present with normal ophthalmologic findings. Timely recognition and steroid therapy can

lead to rapid visual recovery. Clinicians should maintain a high index of suspicion in cases of unexplained bilateral visual loss, especially in populations with higher rates of progression to neuromyelitis optica spectrum disorder.

Abstract No.: 200633
Panel No.: PAO-015
Bilateral Optic Neuritis Following Dengue Infection: A Case Series from a Philippine Tertiary Hospital

*First Author: Erwin **PALISOC***
*Co-Author(s): Winston **CHAN**, Reynaldo **LUZ***

Purpose: To report a case series of two patients with dengue-related bilateral optic neuritis.

Methods: Descriptive case series.

Results: Two patients, aged 33 and 40 (Cases 1 and 2), presented with bilateral blurred vision one week after being diagnosed with dengue fever, which was confirmed via non-structural protein-1 (NS-1) antigen and IgM/IgG antibody testing. Both revealed decreased visual acuity and optic disc swelling on fundoscopy. One patient (Case 2) reported associated eye pain and headache, with relative afferent pupillary defect (RAPD), visual field defects on confrontation and perimetry, and retinal nerve fiber layer thickening on Optical Coherence Tomography of the Optic Nerve Head (OCT-ONH). Both were diagnosed with bilateral optic neuritis and were started on intravenous methylprednisolone 250 mg every 6 hours (total daily dose of 1 gram/day) for 3 days, followed by oral prednisone at 1 mg/kg/day for 11 days, showing marked improvement within three days of treatment.

Conclusions: Dengue fever can rarely present with ocular manifestations such as bilateral optic neuritis. Awareness of this is crucial for early detection and management. Clinicians should maintain a high index of suspicion, especially in endemic areas. Prompt ophthalmologic evaluation and timely steroid treatment may lead to good visual outcomes. These two cases highlight the importance of considering optic neuritis in patients with dengue who present with sudden visual loss.

Abstract No.: 200576
Panel No.: PAO-016
Case Report: Macular Hole Formation Following Neuroretinitis in a Young Female Patient

*First Author: Marianne **CARABEO***
*Co-Author(s): Juan **LOPEZ**, Orlando Louis **UY***

Purpose: To describe the clinical progression of a patient initially managed for atypical optic neuritis and suspected neuroretinitis, who subsequently developed a full-thickness macular hole in the left eye.

Methods: A clinical course review on a 28-year-old young female patient who presented with acute unilateral blurring of vision following a febrile illness. Clinical and fundoscopic examinations revealed bilateral optic disc edema and eventually a unilateral macular star, leading to a working diagnosis of atypical optic neuritis with consideration for neuroretinitis. The diagnostic workup included cranial and orbital magnetic resonance imaging, serologic testing, and serial macular optical coherence tomography (OCT) scans. The patient was started on high-dose intravenous methylprednisolone and oral azithromycin.

Results: Despite initial treatment, the left eye showed limited visual improvement. Fundoscopy and serial OCT revealed progressive structural changes, culminating in a diagnosis of a stage 4 macular hole. The patient maintained stable vision in the right eye and partial recovery of color saturation and visual acuity in the left eye. A follow-up plan for surgical intervention was made, contingent upon three months of disease quiescence.

Conclusions: Neuroretinitis, although typically self-limiting, may result in significant macular complications such as a full-thickness macular hole. Prompt recognition and serial imaging are essential in guiding treatment decisions and surgical planning to optimize visual outcomes.

Abstract No.: 200851
Panel No.: PAO-017
Empty Sella Syndrome Secondary to Intracranial Hypertension from a Cortisol-Producing Adrenal Adenoma: A Case Report
*First Author: Jennifer Joy **SANTOS-RAYOS***
*Co-Author(s): Rishanne Meire **MABBORANG***

Purpose: There are only two reported cases of intracranial hypertension secondary to empty sella syndrome from a cortisol-producing adrenal adenoma. The purpose of this report is to add to the limited literature of secondary empty sella syndrome (adrenal adenoma) causing intracranial hypertension.

Methods: This is a case report of a 65-year-old man presented with persistent headache and vomiting accompanied with episodes of blurring of vision predominantly in the morning. A significant past medical history is the presence of adrenal adenoma.

Results: Bilateral papilledema was noted on physical examination. Cranial magnetic resonance imaging revealed an incident finding of empty sella with no other abnormalities. Laboratory work up were unremarkable except for elevated serum cortisol levels. The patient was managed with acetazolamide and intravenous high-dose corticosteroids to reduce intracranial pressure for visual improvement. Initiation of treatment leads to resolution of subjective complaints and visual improvement.

Conclusions: Cortisol-secreting adrenal adenoma causes degrees of elevated intracranial pressure and subsequent empty sella. Awareness of this disease entity is essential for timely diagnosis to give the appropriate management.

Abstract No.: 200850
Panel No.: PAO-021
Empty Sella Syndrome Secondary to Intracranial Hypertension from a Cortisol-Producing Adrenal Adenoma: A Case Report
*First Author: Jennifer Joy **SANTOS-RAYOS***
*Co-Author(s): Rishanne Meire **MABBORANG***

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Conclusions: Cortisol-secreting adrenal adenoma causes degrees of elevated intracranial pressure and subsequent empty sella. Awareness of this disease entity is essential for timely diagnosis to give the appropriate management.

Abstract No.: 201190
Panel No.: PAO-018
Hiding in Tandem: A Case Report on Atypical Optic Neuritis secondary to Syphilis and HIV Co-infection
*First Author: Miriam Louella **FERMIN***
*Co-Author(s): Allbvi Enric **BASA***

Purpose: To present a case of a middle-aged male with atypical optic neuritis, infectious in origin, and discuss diagnosis, treatment, and its prognosis.

Methods: This is a case report

Results: This is a case of 42-year-old Filipino male, with high risk sexual behavior, presented with subacute progressive bilateral blurring of vision. Ocular exam revealed a visual acuity of 20/125 on the right and 20/60

on the left. Pupils were 3-4 mm sluggishly reactive to light with a grade 2 RAPD noted on the right. Dyschromatopsia was seen bilaterally. Fundoscopy revealed indistinct disc margins bilaterally. Ancillary work up which included nontreponemal, treponemal, HIV antibody testing were all positive, with a CD4 count of 205. Patient was started on oral methylprednisolone 16mg/tab 3x daily with weekly tapering, as well as Aqueous Crystalline Penicillin G 4 million units IV every 4 hours for 14 days. He showed improvement of vision with a BCVA of 20/25 on the right eye and 20/20 on the left eye, as well as complete resolution of dyschromatopsia upon completion of antibiotic treatment for syphilis.

Conclusions: Optic neuritis may present in atypical forms. In patients with high risk sexual behavior with bilateral disc edema, a low threshold for screening for infections should be implemented. This case proves that screening HIV after diagnosis of syphilis is warranted given the rise of the HIV patients in the country the past years. Optic neuritis secondary to syphilis with HIV has good visual outcome when given timely and appropriate treatment.

Abstract No.: 200766
Panel No.: PAO-023
Non-Arteritic Anterior Ischemic Optic Neuropathy in a Patient Undergoing a Linezolid-Containing Treatment Regimen for Multidrug-Resistant Pulmonary Tuberculosis

First Author: Mayjane Joan ***TUMULAK***
Co-Author(s): Benedicto Juan Enrique ***AGUILAR***

Purpose: To present the case of unilateral blurring of vision while undergoing linezolid treatment for multidrug-resistant pulmonary tuberculosis.

Methods: This is a case report of a 56 year-old male complaining of one week history of darkening vision.

Results: The patient is a known case of multidrug-resistant tuberculosis, undergoing a treatment regimen including bedaquiline, pretomanid, moxifloxacin; and linezolid, which can cause a toxic optic neuropathy. The patient underwent a baseline ophthalmologic examination prior to initiation of treatment, which was pertinent for optic nerve head pallor of the left eye despite good visual acuity. The patient complained of one week history of unilateral painless dimming of vision; there was no associated eye pain or pain on eye movement, headache, or systemic signs or symptoms. Past medical history was pertinent for hypertension and diabetes, with a previous history of insidious self-limited dimming of vision of the left eye. Ophthalmologic examination showed slight loss of visual acuity and a swollen right optic disc and a pallorous left optic disc, both corroborated by optical coherence tomography (OCT). Visual field analysis showed generalized decrease in hill of vision. The patient was treated conservatively and advised follow up with an internal medicine specialist. The patient had complete recovery of visual acuity on follow-up but had persistent decreased mean deviation on visual field analysis. Repeat OCT showed improving optic nerve head swelling with persistence in the inferior area.

Conclusions: Non-arteritic anterior ischemic optic neuropathy may confuse ophthalmologic monitoring during linezolid intake.

Abstract No.: 201068
Panel No.: PAO-024
RAPID VISUAL RECOVERY IN A PEDIATRIC ISOLATED BILATERAL OPTIC NEURITIS WITH HYPERINTENSE MRI BRAIN LESIONS: A CASE REPORT

First Author: Renie Boy ***DECOSTO***

Purpose: Pediatric Isolated Optic Neuritis is a rare inflammation of optic nerve characterized by isolated episode (either single or recurrent) of optic neuritis but no associated neurologic or systemic disease. The disease in children commonly involved only one eye and occurrence in the bilateral eyes is rare. It is well established that intravenous steroid treatment can speed visual recovery but does not alter final visual function. The purpose of this report is to present a rare case of isolated bilateral

optic neuritis in children with hyperintense MRI brain lesions with complete recovery of visual function after a successful initiation of pediatric ONTT protocol.

Methods: A case report

Results: A 7-year-old Filipino female child presented with acute onset of bilateral severe blurring of vision, loss of color perception and significant eye pain on eye movement without associated systemic and focal neurologic signs and symptoms. The funduscopic examination revealed a severe bilateral optic nerve head edema. The Contrast Brain and Orbit MRI revealed a hyperintense white matter lesions typical of multiple sclerosis. After 4 weeks of completing the 3-day IV Methylprednisolone therapy at 30 mg/kg/day and 11 days oral steroid therapy, there was a full recovery of the normal visual acuity and color perception. The optic nerve edema also fully regressed alongside the resolution of hyperintense MRI brain lesions.

Conclusions: Early diagnosis of optic neuritis in children and initiation of ONTT protocol is paramount in reducing complications such as optic nerve atrophy from chronic non-resolving optic nerve inflammation and edema.

Abstract No.: 200345
Panel No.: PAO-022
Vision Under Pressure: A Case of Idiopathic Intracranial Hypertension in a Pediatric Patient

*First Author: Marianne **CARABEO***
*Co-Author(s): Leonides Karlo Iii **MELENDRES**, Jian **NARAG**, Holijah **UY***

Purpose: To report a case of idiopathic intracranial hypertension (IIH) in a pediatric patient and highlight the importance of early recognition using clinical features, neuroimaging, and lumbar puncture guided by the Modified Dandy Criteria.

Methods: A 17-year-old overweight female (BMI 26.9) presented with a one-month history of progressive retrobulbar and frontal headache, radiating to the occipital area, with a pain scale severity of 8 out of 10, associated with transient blurring of vision, photophobia, and vomiting. Neurologic examination, including mental status, cranial nerves, and cerebellar function, was normal. Visual acuity was 20/20 in both eyes, color vision was intact, and intraocular pressures were within normal limits. Fundus examination revealed grade 4 bilateral papilledema on Frisén scale. Cranial CT showed no mass, hydrocephalus, or midline shift. MRI revealed flattening of the posterior globe and protrusion of the prelaminar optic nerve, without signs of venous sinus thrombosis. No structural and vascular lesions were identified. Lumbar puncture revealed an elevated opening pressure of 44 cm H_2O, with normal cerebrospinal fluid composition. No other cause of increased intracranial pressure was found.

Results: The patient met all criteria for IIH as outlined by the Modified Dandy Criteria. She was started on acetazolamide (1g/day), with significant improvement in headache. She was later referred to the nutrition service for weight management.

Conclusions: Idiopathic intracranial hypertension is a diagnosis of exclusion. The Modified Dandy Criteria provides a reliable framework for diagnosis. Early treatment and weight control are key to preventing permanent visual impairment.

Orbital and Oculoplastic Surgery

Abstract No.: 200575
Panel No.: PAO-028
A Case Report: Orbital Apex Syndrome secondary to Chronic Invasive Fungal Rhinosinusitis and its Diagnostic Challenges

*First Author: Marie Joan **LOY***
*Co-Author(s): Diane Frances **PERALTA**, Yvette Marie **SANTIAGO-GATMAITAN***

Purpose: Background: Chronic Invasive Fungal Rhinosinusitis (CIFRS) is an indolent infection with slow destructive process that mostly affects immunocompromised patients.

Methods: Case Presentation: This is a case of a 65-year-old female with a history of kidney transplantation, diabetes mellitus, and immunosuppressant use. She presented with sudden painless vision loss of the right eye. The patient eventually developed ophthalmoplegia and on review of systems, noted a five-month history of right-sided headache. Magnetic resonance imaging was requested which revealed a right-sided ill-defined nasopharyngeal mass. On admission, biopsy was done which revealed bacterial and fungal elements. Antibiotics and isavuconazole were then started. The patient was then managed with endoscopic tumoral debulking and amphotericin B since with progression of right-sided ptosis and ophthalmoplegia. Histopathology showed reactive inflammatory tissue, hence a short course of intravenous high-dose steroids was given. Overall health declined and patient eventually expired.

Results: Discussion: CIFRS presents with vague, localized symptoms progressing silently in immunosuppressed hosts. Extension of the mass to the orbital apex led to the vision loss and ophthalmoplegia of the patient. On review of earlier imaging, polysinus disease was noted on the right side. However, early imaging may be inconclusive since early disease is limited to the submucosal area. Histopathology and culture remains essential for diagnosis.

Conclusions: Conclusion: This case highlights the importance of maintaining high clinical suspicion for CIFRS in immunocompromised patients with vague, localized symptoms such as headache. Prompt recognition and tissue diagnosis are critical for early intervention.

Abstract No.: 201097
Panel No.: PAO-034
A Case of Delayed Onset Retrobulbar Hemorrhage Following Anterior Orbitotomy for Orbital Hemangioma in a Pediatric Patient

*First Author: Jonnah Kristina **TEOPE***
*Co-Author(s): Steffani Krista **CHUA**, Maria Gieniv **VALERIANO***

Purpose: Acute retrobulbar hemorrhage, a collection of blood in the retrobulbar space, is a rare ophthalmic phenomenon, usually occurring within 24 hours post-surgery. We present a case of delayed onset retrobulbar hemorrhage following an anterior orbitotomy with orbital hemangioma in a pediatric patient

Methods: Case Report

Results: A 9 year old female presented with 8 year history of cystic mass at her right medial canthal area. Contrast-enhanced magnetic resonance imaging of the orbit revealed a right orbital mass with prominent right superior ophthalmic vein. Elective anterior orbitotomy and excision biopsy was done, revealing orbital hemangioma. Post operative recovery was initially unremarkable. However, on 72 hours post op, the patient developed sudden right eye pain accompanied with blurring of vision, proptosis, extraocular muscle movement limitations, and elevated intraocular pressure. Lateral canthotomy with cantholysis of the right eye was performed. Emergency cerebral angiogram with sclerotherapy using bleomycin was done by interventional radiology. On the post-operative follow-up, the vision improved and the proptosis and intraocular pressure has decreased.

Conclusions: Retrobulbar hemorrhage is one of the surgical complications that may lead to irreversible vision loss. Retrobulbar hemorrhage can occur beyond 24 hours. Therefore, post operative close monitoring is crucial for patient's optimal safety and recovery following surgery.

Abstract No.: 201154
Panel No.: PAO-032
A Case on Eyelid Reconstruction Using a Nasal Septum Graft and Upper Eyelid Flap Transposition

First Author: Alfonso ***BENGZON***
Co-Author(s): Isabella ***BONDOC****, Camille* ***SISON***

Purpose: Basal cell carcinoma (BCC) is the most common malignancy of the eyelid, accounting for 90% of cases. The definitive treatment would be a complete surgical excision with appropriate margins; however, this may cause functional impairment and significant disfigurement for the patient. This study aims to guide and support ophthalmologists in making the appropriate surgical decisions for patients with BCC.

Methods: This is a case of a 44 year-old female presenting with right upper eyelid drooping, and tearing. She previously underwent wide excision biopsy of the right lower eyelid 6 years prior for BCC, resulting in an ill-defined right lower eyelid with poor lid closure. In the interim, she also noted progressive drooping of the right upper eyelid. In this admission, right lower eyelid reconstruction with ptosis repair was done. A nasal septum graft and its mucosa was harvested to recreate the posterior lamella. On the other hand, an eyelid transposition flap from the incision site for the ptosis repair) was performed to recreate the anterior lamella.

Results: With the graft and flap, the patient was able to regain an improved eyelid appearance and function, in turn, alleviating the patient from their significant and chronic eye pain.

Conclusions: Lid reconstruction is a challenge in cases of BCC, especially with large defects after excision. In spite of this, there are still many innovative ways to recreate the anterior and posterior lamella in order to maintain functionality and cosmesis.

Abstract No.: 200886
Panel No.: PAO-027
A Rare Case of Alveolar Rhabdomyosarcoma in an Adult: A Case with Atypical Clinical Course

First Author: Gabriel ***BUNAGAN***
Co-Author(s): Esther Carmen Arvella ***EREÑO****, Anna Katrina* ***GARCIA***

Purpose: To report a rare case of alveolar rhabdomyosarcoma in a 48-year-old occurring in an unfavorable site (paranasal sinus) with orbital involvement.

Methods: A 48-year-old male sought consult due to progressive right eye swelling and proptosis. Seven months prior, patient had nasal congestion with right eye discomfort and proptosis. Patient underwent incision biopsy for a nasal tumor yielding alveolar rhabdomyosarcoma. He then underwent 5 cycles of chemotherapy. However still with progressive right eye swelling and proptosis. On examination, patient was grossly proptotic with resistance to retropulsion, no bruit appreciated. Visual acuity was CF5 on the right and 20/25-1 on the left; normal intraocular pressure on both eyes, extraocular movement was limited on the right eye. On anterior segment examination, patient had swollen lids, matted lashes, injected conjunctiva, Grade 3 chemosis, deep chamber, no cells, no flare, lens opacity. Funduscopy was unremarkable.

Results: Repeat CT scan on the head and neck was done yielding aggressive infiltrative mass at the right ethmoid and right orbit. A multidisciplinary team did total orbital exenteration, right with Suprastructure Maxillectomy with Ethmoidectomy, Sphenoidectomy and underwent 9 cycles of Chemotherapy. Three months post-procedure, tumor recurrence was noted, the patient underwent Right Medial Maxillectomy, Completion Ethmoidectomy, Neck Dissection,right. After surgical treatment, patient will undergo 1 year of chemotherapy.

Conclusions: Alveolar Rhabdomyosarcoma is primarily a pediatric cancer, with adult cases being extremely rare, accounting of less than

1% of soft tissue sarcomas in adults. Due to its rarity, a high index of suspicion should be employed

Abstract No.: 201314
Panel No.: PAO-037
A Rare Syndromic Cause of Nasolacrimal Duct Obstruction Presenting as Chronic Tearing and Lash Matting

First Author: Reginald Robert ***TAN***
Co-Author(s): Katrina ***FELICIANO****, Yvette* ***SANTIAGO-GATMAITAN****, Sandra* ***WORAK-TAN***

Purpose: To describe the case of a patient with a rare syndrome that causes nasolacrimal duct obstruction and presents with chronic ocular surface abnormalities

Methods: This is a case report of a 13-year old male with a chronic tearing of both eyes with recurrent periorbital swelling and lash matting, along with various systemic findings.

Results: A then 13-year old male presented with a tearing of both eyes since birth with recurrent periorbital swelling, discharge and lash matting on waking up. He also had various systemic findings including cleft lip and palate, unilateral hearing loss, syndactyly and oligodactyly; with a history of undergoing cheiloplasty, palatoplasty and anterior nasal fistula closure as a child. On physical examination, the patient was noted to have erythematous eyelid margins, thick lashes with collarettes, scant mucoid discharge, papillae, and pannus bilaterally. The dye disappearance test was negative bilaterally and a lacrimal probe could not be inserted into the upper canaliculi. Dacryoscintigraphy showed a complete obstruction of both nasolacrimal ducts. The patient was then diagnosed as a case Ectrodactyly Ectodermal Dysplasia Syndrome presenting as complete nasolacrimal duct obstruction, upper punctal stenosis and chronic staphylococcal blepharoconjunctivitis of both eyes. The patient then underwent regular follow up to treat the ocular surface infection and obtain Otorhinolaryngology evaluation prior to undergoing bilateral external dacryocystorhinostomy.

Conclusions: This report details the case of a rare syndromic cause of nasolacrimal duct obstruction and other ocular surface abnormalities, providing information on the clinical presentation and course of such patients who might need long-term multidisciplinary care.

Abstract No.: 200761
Panel No.: PAO-029
CASE REPORT: Two Cases of Primary Mucinous Neoplasms of the Eyelid – Diagnostic Dilemma Between Mucinous Adenoma and Mucinous Adenocarcinoma

First Author: Alex ***SUA***
Co-Author(s): Christian Ceasar ***NERPIOL***

Purpose: Primary mucinous neoplasms of the eyelid are rare and diagnostically challenging due to their histologic resemblance to metastatic mucinous adenocarcinomas and overlap between benign and malignant lesions. We present two cases involving middle-aged male patients with eyelid tumors, both showing histopathologic features suggestive of mucinous neoplasm. Immunohistochemical (IHC) studies were recommended for definitive classification.

Methods: Retrospective Chart Review of 2 similar case reports of Mucinous Neoplasms of the Eyelid

Results: Primary mucinous neoplasms are very rare tumors occurring primarily in the head and neck but particularly seen on the eyelids. These lesions can present significant diagnostic difficulty as they mimic metastatic gastrointestinal or breast adenocarcinomas, especially when mucin production is conspicuously seen. They have a high recurrence rate but fortunately have a low metastatic potential. Both cases exhibit overlapping histologic features, including bland nuclei, mucin production, and lobulated growth. Tumor involvement of the margins and absence of definitive malignant features suggest a low-grade lesion, though mucinous adenocarcinoma cannot be excluded without IHC workup. Key markers such as CK7 and

CK20 help identify the tumor's origin, while p63 and Ki-67 help differentiate adenoma from adenocarcinoma based on basal/myoepithelial cell presence and proliferation.

Conclusions: These two cases underscore the importance of comprehensive histologic evaluation and immunohistochemistry in accurately diagnosing eyelid mucinous neoplasms. Given their potential overlap with metastatic lesions and the therapeutic implications of distinguishing adenoma from adenocarcinoma, a systematic approach is critical. A conclusive diagnosis will still need IHC studies.

Abstract No.: 200882
Panel No.: PAO-025
Choroidal Melanoma In Disguise: A Case Report

*First Author: Steffani Krista **CHUA***
*Co-Author(s): Manuel Iii **ARENDAIN***

Purpose: To report a case of choroidal melanoma in a healthy Filipino female patient.

Methods: This is a case report.

Results: A 49-year-old Filipino female consulted for a 3-month history of progressive blurring of vision on the left eye. The patient was previously managed as a case of retinal detachment on the left eye and was treated with focal laser. On presentation, the best corrected visual acuity was 20/20 on the right eye and hand movement on the left eye. There was left relative afferent pupillary defect and inferior retinal detachment with corrugated surface and reddish layer posteriorly. Initial B-scan ultrasound showed a homogenous hypoechoic dome lesion arising from the inferior ocular wall which undulates on dynamic ultrasonography, mimicking retinal detachment. On magnetic resonance imaging, there was a hyperintense enhancing focus intraocularly in the left globe. Biopsy was done and histopathological examination of the intraocular mass tissue revealed choroidal melanoma. This prompted subsequent enucleation and radiation therapy.

Conclusions: Choroidal melanoma is the most common primary intraocular malignancy in adults and typically presents as variably pigmented, elevated, dome-shaped mass that can be associated with retinal detachment. However, there are masquerading presentations that necessitate definitive histopathologic evaluation. A high index of suspicion is essential for proper diagnosis, most especially in such cases wherein prompt management can save the life a patient.

Abstract No.: 201174
Panel No.: PAO-035
Endocrine Mucin-Producing Sweat Gland Carcinoma of the Eyelid: A Rare Case with Minimal Local Documentation in the Philippines

*First Author: Catherine **VIGO-MATIC***
*Co-Author(s): Ralph **LONTOC**, Ramon Jr. **LU***

Purpose: This case report describes an exceptionally rare presentation of endocrine mucin-producing sweat gland carcinoma (EMPSGC) involving the left upper eyelid, highlighting clinical features, diagnostic considerations, histopathological findings, and management strategies. Given the very limited global literature and minimal local documentation, this case provides essential insights for ophthalmologists and pathologists in the Philippines.

Methods: A 75-year-old Filipino woman presented with a painless, progressively enlarging mass on her left upper eyelid. Surgical excision under local anesthesia was performed, followed by comprehensive histopathologic evaluation, including immunohistochemical (IHC) testing with markers such as Synaptophysin, Chromogranin, CK7, ER, and p63. Whole-body PET/CT imaging was also undertaken to evaluate potential metastatic spread and to assist in definitive diagnosis.

Results: Clinical examination revealed an 8-mm nodular lesion initially suspected as benign. Histopathologic analysis identified a circumscribed tumor comprising solid and

cribriform nests of epithelial cells within a mucin-rich stroma, consistent with EMPSGC. IHC staining showed diffuse positivity for Synaptophysin and Chromogranin, patchy positivity for CK7, strong positivity for ER, and focal positivity for p63, confirming the diagnosis. PET/CT imaging demonstrated no metastatic or hypermetabolic disease, indicating localized malignancy. Follow-up after surgery showed no recurrence, pain, or visual disturbance.

Conclusions: EMPSGC remains a rare eyelid malignancy presenting significant diagnostic challenges due to its benign clinical appearance. Definitive diagnosis depends on meticulous histopathologic and immunohistochemical evaluation. Complete surgical excision with clear margins is essential. This case represents a rare occurrence in the Philippines, with minimal to no local documentation available.

Abstract No.: 200826
Panel No.: PAO-030
Fixing the Fixus: A Case of Divergent Strabismus Fixus

*First Author: Hana Vienne **GECOSALA***
*Co-Author(s): Nicolo **PADERNA**, Hoshiko **YOSHIDA***

Purpose: To present a rare case of divergent strabismus fixus. This is a case of a 25-year-old female from Davao City, Philippines who presented with a fixed outward deviation of the left eye. Initially, she noted painless proptosis of the left eye and was diagnosed at our institution with non-specific orbital inflammation. She was maintained on oral prednisone for six months. However, the patient was lost to follow-up and later returned with recurrent proptosis, for which treatment was reinitiated. During the second course of immunosuppressive therapy, she developed diplopia and progressive outward deviation of the left eye. Ocular examination revealed best-corrected visual acuity of 20/20 in both eyes, 180 prism diopters (PD) of exotropia, marked limitation of adduction on the left eye, and full on the right. Orbital imaging showed enlargement of multiple recti muscles (right superior rectus, left medial, inferior, superior and lateral rectus muscle) involving their respective tendinous insertions consistent with orbital pseudotumor.

Methods: Case Report

Results: The patient underwent maximal recess-resect of the right eye and supramaximal recess-resect, of the left eye which resulted in significant improvement of ocular alignment, with a residual exotropia of 10 PD and horizontal diplopia

Conclusions: Strabismus fixus is rare, more particularly divergent strabismus fixus. Surgery remains the primary treatment. The best surgical approach is one that significantly improves eye movement limitations while causing the least possible new strabismus in other directions of gaze.

Abstract No.: 201037
Panel No.: PAO-033
Lacrimal Gland Adenoid Cystic Carcinoma: A Case Report

*First Author: Maria Donna **SANTIAGO***
*Co-Author(s): Lexus Neil **CAHIMAT***

Purpose: To describe the clinical features and outcome of an adenoid cystic carcinoma (ACC) of the right lacrimal gland on a 37-year old female who underwent en bloc excision through lateral orbitotomy with beveled osteotomies and adjuvant radiotherapy.

Methods: This is a case report.

Results: This report details a 37-year-old Filipino female with lacrimal gland ACC, with a 4-month history of eye pain and proptosis. Plain orbital computed tomography scan (CT) revealed a right orbital mass. En bloc excision of the tumor through lateral orbitotomy under general anesthesia was done. Frozen section revealed a malignant tumor, favoring ACC. The lateral orbital bone was not repositioned for adjuvant radiotherapy. Final histopathologic diagnosis of ACC of the right lacrimal gland was made based on the histologic features consistent with the said pathology. Systemic

surveillance with cranial MRI and chest CT, both with contrast, showed absence of regional and distant metastases. Patient completed adjuvant radiotherapy as part of her comprehensive treatment plan. 5 months post-operatively, vision remained excellent at 20/20 without signs of tumor recurrence.

Conclusions: ACC is the most common malignant epithelial tumor of the lacrimal gland but accounts for less than 2% of tumors arising in the head and neck area. It is an aggressive malignancy, hence, meticulous examination to arrive at the correct diagnosis cannot be over-emphasized. Advances in orbital imaging, correlated with clinical findings and surgical expertise should allow us to define the most efficient management. Quality of life can be preserved through eye-sparing surgery.

Abstract No.: 200253
Panel No.: PAO-026
Mimicking the Great Mimicker: A Case of Eyelid Juvenile Xanthogranuloma in a Pediatric Patient with Pulmonary Tuberculosis

*First Author: Nonettee **PASCO-ROSETE***
*Co-Author(s): Marco **TUMALAD**, Holijah **UY**, Sandra **WORAK-TAN***

Purpose: To report a rare case of eyelid juvenile xanthogranuloma (JXG) in a child with pulmonary tuberculosis (PTB), highlighting diagnostic challenges and a potential clinical association.

Methods: A 7-year-old female, undergoing two month treatment for PTB, presented with a six-month history of a progressive, non-tender left upper eyelid mass. Visual acuity was 20/20 bilaterally, with full ocular motility and normal intraocular pressure. Orbital CT suggested a lid abscess. Initial incision and drainage revealed purulent material; however, Acid-Fast Bacilli staining was negative, Gram stain revealed only pus cells, and culture was negative. Due to the nonhealing wound in the post-operative site, wound debridement was done showing presence of yellowish tissues, initially assessed as extrapulmonary TB. However, histopathology reveled presence of lymphohistiocytic proliferation with giant cells and necrosis. Immunohistochemistry (IHC) showed CD68 positive, CD1a negative, and S100 negative, findings compatible with solitary JXG.

Results: Juvenile xanthogranuloma is a benign, non-Langerhans cell histiocytic disorder typically presenting in infants as solitary cutaneous nodules. Extracutaneous sites are frequently found in the iris and conjunctiva, which were not found in our patient. The patient's age and lesion location contributed to the diagnostic challenge. Classic histopathologic findings include Touton giant cells, but these are not pathognomonic and were absent in this case.

Conclusions: In TB-endemic settings, JXG may mimic extrapulmonary TB. This case highlights the importance of correlating clinical findings with histopathology and IHC to avoid misdiagnosis. Awareness of JXG and its diagnostic markers is essential in evaluating persistent eyelid lesions in children.

Abstract No.: 200885
Panel No.: PAO-031
Terror in the Deep: A Rare Case of Periorbital Necrotizing Fasciitis Caused by Pseudomonas aeruginosa in a Newly Diagnosed Diabetic

*First Author: Maximino **LIBRE JR***
*Co-Author(s): Louise Patricia May **ANGOS**, Gabriel **BUNAGAN**, Adriel Vincent **TE***

Purpose: To report a case of Periorbital Necrotizing Fasciitis caused by Pseudomonas aeruginosa in a newly diagnosed diabetic

Methods: This is a case report.

Results: A 50-year-old Filipino male with newly diagnosed uncontrolled type II diabetes mellitus presented with progressive right periorbital edema, erythema, and bullae development after an insect bite. Initial examination showed complete ptosis with cellulitis involving the periorbital area extending to frontotemporal tissue, with beginning necrotic subcutaneous tissue on the upper lid. Computed tomography images and surgical observations validated necrotizing fasciitis affecting the glabellar and temporal areas. The wound cultures identified Pseudomonas aeruginosa. The patient had immediate surgical debridement,

aggressive intravenous antibiotic treatment (vancomycin and ceftazidime), stringent glucose management, and daily wound care. Marked clinical enhancement was observed, with maintenance of globe integrity and partial recovery of visual acuity to 20/30 on BCVA.

Conclusions: Necrotizing fasciitis is a severe bacterial infection that can affect the soft tissues under the skin, especially the superficial and deep fasciae. It can be life-threatening or even cause vision loss. This case highlights the importance of high clinical suspicion for necrotizing fasciitis especially in an immunocompromised patients. Pseudomonas aeruginosa though uncommon should be on the list of possible causes. Early surgical intervention and targeted antimicrobial therapy are critical to optimize outcomes and prevent morbidity.

Abstract No.: 201170
Panel No.: PAO-038
Think Twice: A Case of a Glial Heterotopia Mistaken for a Dacryocystocele in a 2 year old Female

*First Author: Rustan **HAUTEA***
*Co-Author(s): Louise **AGUIRRE***

Purpose: This paper aims to present a rare case of glial heterotopia atypically located on the medial canthal area of a 2 year old female

Methods: Case Report

Results: Although the patient presented clinically and radiographically as a case of dacryocystocele, histopathology revealed the mass to be a glial heterotopia.

Conclusions: When encountering a patient with a medial canthal mass and epiphora, one must also consider glial heterotopias as a differential diagnosis.

Abstract No.: 201096
Panel No.: PAO-036
Traumatic Globe Dislocation Into the Maxillary Sinus Secondary to Penetrating Orbital Injury: A Case Report

*First Author: Aliette Alyssa **MESA***

Purpose: To report a rare case of traumatic globe dislocation into the maxillary sinus resulting from a penetrating orbital injury and associated orbital wall fractures.

Methods: One day post-trauma, the patient underwent removal of retained right orbital foreign body, surgical exploration of the right orbital cavity, repositioning of the right globe, and repair of avulsed wounds under a joint Ophthalmology and ENT in theater procedure.

Results: Postoperatively, the ocular surface remained intact, ocular motility and eyelid function was preserved to a significant extent, and the globe remained viable. Despite the absence of light perception in the right eye, successful globe repositioning, substantial recovery of extraocular movements, and preserved voluntary eyelid function contributed to an excellent cosmetic outcome.

Conclusions: Globe dislocation into the maxillary sinus is a rare occurrence. This case highlights the importance of including such an occurrence in the differential diagnosis, particularly in instances of high-velocity trauma. While the visual prognosis is often poor in majority of cases, timely assessment and appropriate management remain crucial to preserve the globe, given its psychological significance and the facilitation of future cosmetic or prosthetic rehabilitation.

Pediatric Ophthalmology

Abstract No.: 200969
Panel No.: PAO-040
Horizontal Rectus Muscle Insertions in Patients undergoing Strabismus Surgery in a Tertiary Government Hospital in the Philippines

First Author: Michelle ***DAGTA-ALABAN***
Co-Author(s): Jennifer ***BAWALAN***

Purpose: This study aimed to find if there is a significant difference in EOM insertion distances and width between data in literature and patients of QMMC undergoing horizontal strabismus surgery. This study aims to help in preoperative planning for any surgery that will involve EOM manipulation in our setting.

Methods: All patients undergoing horizontal strabismus surgery, excluding those with organic causes of strabismus, were included. Preoperatively, investigators measured the prism diopters of horizontal deviation. After isolating the medial rectus and/or lateral rectus, distances from the limbus were be measured at the midpoint. Distances of the EOM insertions for adults were compared to data by Fuchs and those for children were compared to data by Lin, et. al.

Results: A total of 36 eyes from 23 patients were investigated. Both adult and pediatric patients with esotropia, and adults with exotropia had statistically significant decrease in MR width compared to literature (p-values 0.03, 0.000003, 0.0016). Pediatric patients with exotropia likewise had statistically significant decrease in muscle widths (MR p-value 0.012 and LR p-value 0.0014). In those undergoing bilateral surgery, comparison of insertion distances for the LR and the MR between two eyes yielded statistically significant difference (p-values 0.034 and 0.00042).

Conclusions: EOM insertion distances showed clinical variation in the studied population, with some demonstrating observable correlation to their strabismus patterns. Although statistical treatment did not yield significant differences in EOM insertion distances, and findings cannot be generalized beyond strabismic patients, the results may still aid in preoperative planning.

Abstract No.: 201268
Panel No.: PAO-039
Muscle Transplantation in Large-Angle Sensory Exotropia: A Case Report

First Author: Fay ***CRUZ***
Co-Author(s): Katherine Marl ***FERRER***

Purpose: Large-angle sensory exotropia presents a significant surgical challenge, necessitating correction involving three to four horizontal rectus muscles. Despite adherence to maximal correction parameters, results are frequently suboptimal. Muscle transplantation has emerged as a promising alternative, particularly in revision cases. This technique enables greater muscle lengthening and stronger recession effect while preserving ocular motility. In contrast to supramaximal recessions—where the muscle is reinserted posterior to the equator, potentially restricting movement—transplanted segments are positioned anterior to the equator, maintaining full range of motion. Moreover, using autologous grafts avoids complications associated with synthetic materials, such as foreign body reaction or rejection.

Methods: We present the first locally documented case of muscle transplantation for strabismus correction. A 38-year-old woman presented with longstanding right eye outward deviation following congenital cataract extraction via lensectomy without intraocular lens implantation. She was lost to follow-up, resulting in progressive exotropia. Initial surgery involved secondary IOL implantation, followed by an 11.0mm supramaximal right lateral rectus recession and 6.5mm right medial rectus plication to address a 65PD exotropia. Due to residual exotropia (18–65 PD), re-operation was performed.

Results: In the second procedure, a 2.0mm autologous graft—harvested from a 6.0mm left medial rectus resection—was transplanted to the right lateral rectus. This was combined

with a 6.0mm left lateral rectus recession and a 3.0mm right medial rectus re-resection. The patient achieved stable orthophoria at 2.5 and 6 months postoperatively.

Conclusions: This case supports muscle transplantation as an effective and safe approach for managing large-angle exotropia.

E-POSTERS

APVRS

Intraocular Inflammation, Uveitis & Scleritis

Abstract No.: 200412
A Case of Autoimmune Retinopathy (AIR) That Improved Despite the Continuation of Immune Checkpoint Inhibitors (ICIs) in Breast Cancer
First Author: Hiroki ***KANEKO***
Co-Author(s): Takafumi ***HARADA****, Maki* ***SUZUKI****, Atsuko* ***TANAKA***

Purpose: ICIs are increasingly used for various malignancies, and ocular immune-related adverse events (irAEs) are being reported more frequently. We report a case of AIR that developed during ICI therapy and subsequently improved despite the continuation of treatment for breast cancer.

Methods: A 64-year-old woman with a history of diabetes and primary open-angle glaucoma began chemotherapy including pembrolizumab for breast cancer. Six weeks into treatment, she noticed bilateral visual decline. Examinations revealed progressive bilateral visual field defects and disruption of the ellipsoid zone on optical coherence tomography, findings not present prior to ICI therapy.

Results: Anti-recoverin antibodies were repeatedly negative. Based on the clinical course, she was diagnosed with AIR as an irAE. Despite ocular involvement, ICI therapy was continued due to the status of the primary disease. Her visual field defects and loss of the ellipsoid zone disruption were ameliorated in parallel with tumor regression.

Conclusions: This is a rare case of AIR as an irAE during ICI therapy that improved without discontinuation of the treatment. Our findings suggest that visual function can partially or even fully recover under continued ICI therapy. Early recognition and multidisciplinary management are crucial to balance oncologic efficacy and visual preservation.

Abstract No.: 200429
A Case of Bilateral Occlusive Periphlebitis in a Filipino Pediatric Patient With Healed Pulmonary Tuberculosis
First Author: Jose Carlo ***ARTIAGA***
Co-Author(s): Faye ***LEVINA****, Kryzka* ***MEDINA***

Purpose: Occlusive periphlebitis, while frequently associated with inflammatory or infectious diseases, may at times be idiopathic. In tuberculosis endemic countries, tuberculous retinal vasculitis must be considered. Evaluation of the clinical profile in combination with targeted diagnostics can lead to the underlying etiology and appropriate management. This report aimed to describe a case of a bilateral occlusive periphlebitis in a Filipino pediatric patient.

Methods: A retrospective analysis of the patient's clinical record including history and physical examination, diagnostic work-up, course of disease, and management.

Results: A 15-year-old male previously treated for pulmonary tuberculosis presented with sudden-onset bilateral blurring of vision more severe on the left eye. Fundus exam displayed bilateral exudative, hemorrhagic periphlebitis, optic disc edema, and macular exudates on the right eye. Fluorescein angiography showed bilateral diffuse perivascular and optic disc leakage, with extensive ischemia on the left eye. Diagnostics revealed a pulmonary nodule and positive QuantiFERON-tuberculosis test. Despite steroid treatment, he developed recurrent vitreous hemorrhage on the left eye, entailing pars plana vitrectomy, and neovascularization and multifocal ischemia on the right eye, requiring laser photocoagulation and intravitreal anti-vascular endothelial growth factor (anti-VEGF). Active tuberculous retinal vasculitis was considered, hence initiation of anti-tubercular treatment.

Conclusions: Tuberculous retinal vasculitis continues to be a diagnostic challenge. Primary infection, secondary inflammation, and sequelae of ischemia are controlled with a combination of anti-tubercular treatment, corticosteroids, laser therapy, intravitreal anti-VEGF, and surgery.

Abstract No.: 200708
A Case of Probable Granulomatosis With Polyangiitis in a 51-Year-Old Female

*First Author: Juan **LOPEZ***
*Co-Author(s): Tamilyn Chelsea **LADDARAN**, Kristine **VELASQUEZ***

Purpose: To describe a case of probable granulomatosis with polyangiitis, initially diagnosed as a case of diabetic retinopathy.

Methods: A 51-year-old diabetic female presented with a one-year history of progressive, painless blurring of vision in the left eye. Visual acuity was 20/40 in the right eye and 20/400 in the left. There were grade 1+ anterior chamber cells, with normal intraocular pressure in both eyes. Fundus examination of the right eye showed multiple dot-blot hemorrhages, exudates, and telangiectatic vessels at the retinal midperiphery. In the left eye, 360-degree posterior synechiae and a dense cataract obstructed the view of the retina. B-scan ultrasonography showed traction membranes with retinal detachment. She was diagnosed with proliferative diabetic retinopathy in the right eye and tractional retinal detachment secondary to proliferative diabetic retinopathy in the left. Panretinal photocoagulation was performed on the right, and pars plana vitrectomy with phacoemulsification and posterior chamber intraocular lens implantation was done on the left.

Results: During surgery, extensive exudation was seen under the detached retina. Uveitis work-up was done postoperatively. Tuberculosis and syphilis testing were negative. There was an elevation of erythrocyte sedimentation rate (109 mm/hr), positive c-ANCA titer, and elevated creatinine (1.22 mg/dl). The patient was started on systemic steroids and advised to undergo a kidney biopsy for definitive diagnosis.

Conclusions: Granulomatosis with polyangiitis causes inflammation of small- to medium-sized vessels, typically affecting the kidneys, eyes, and lungs. Any structure of the eye may be affected, but exudative retinal detachment is an uncommon manifestation.

Abstract No.: 200665
A Rare Case of Endogenous Endophthalmitis Caused by Hypermucoviscous Klebsiella Pneumoniae (hmKP) From a Pancreatic Pseudocyst

*First Author: Yuya **SAITO***
*Co-Author(s): Takayuki **BABA**, Takayuki **FUKUSAKA**, Daisuke **SHIMIZU**, Masumi **TOBARI***

Purpose: Endogenous endophthalmitis typically arises from liver abscesses, while pancreatic pseudocysts are a rare source. Klebsiella pneumoniae, especially the hypermucoviscous strain, is known for its invasive potential and can cause metastatic infections. Here, we are presenting an extremely rare case with endogenous endophthalmitis caused by hmKP from pancreatic pseudocysts.

Methods: A 72-year-old man with chronic pancreatitis and type 2 diabetes mellitus presented with appetite loss and decreased vision in his left eye. Imaging revealed a pancreatic pseudocyst, and endoscopic retrograde cholangiopancreatography (ERCP) fluid culture showed hmKP. At initial examination, his visual acuity was 1.2 in the right eye and no light perception in the left. The right eye was unremarkable. The left eye showed hypopyon, conjunctival chemosis, and scleral melting with prolapsed vitreous, indicating panophthalmitis. Evisceration of the left eye was performed due to intractable pain and no visual potential. Intraoperative ocular cultures yielded the same hmKP as in the pancreatic cyst fluid. Postoperatively, endoscopic nasopancreatic drainage and systemic antibiotics were administered, and the patient was discharged on hospital day 30.

Results: This case demonstrates that pancreatic pseudocysts, though uncommon, can serve as the primary focus of endogenous endophthalmitis. Identification of hmKP should prompt careful ophthalmologic evaluation to rule out metastatic ocular involvement.

Conclusions: Clinicians should include pancreatic cystic lesions in the differential diagnosis of a causative focus of endogenous endophthalmitis, especially in patients infected with hmKP.

Abstract No.: 200692
A Rare Spontaneous Presentation of Post–Cataract Surgery Endophthalmitis Caused By Morganella Morganii

First Author: Samiksha S. ***KUMAR***
Co-Author(s): Namita C. ***ANAGOL****, Pratiksha S.* ***KUMAR***

Purpose: We report a case of postoperative endophthalmitis caused by Morganella morganii following an uneventful cataract surgery with no major risk factors.

Methods: A retrospective observational study.

Results: An 86-year-old gentleman underwent routine, uneventful phacoemulsification surgery on the right eye. He has hypertension and no systemic abnormalities. The first postoperative day was normal. He was consulted on the fourth day due to redness, pain, and blurred vision since the previous night. He was diagnosed with right eye postoperative endophthalmitis and elevated intraocular pressure. He was taken up for immediate pars plana vitrectomy, silicone oil injection, and an intravitreal injection of vancomycin (1 mg), ceftazidime (2.25 mg), and dexamethasone (1 mg). Topical steroids, oral ciprofloxacin, and antiglaucoma medications were started. The sample showed gram-negative bacilli. With no improvement, a repeat intravitreal injection of vancomycin (1 mg), ceftazidime (2.25 mg), and dexamethasone (1 mg) was administered, along with piperacillin and tazobactam (225 µg). Urine and blood cultures were negative. The culture grew Morganella morganii, which was sensitive only to amikacin, tobramycin, ceftriaxone, and meropenem. The inflammation worsened, and a corneal epithelial defect developed. An anterior chamber wash, intraocular lens explantation, silicone oil injection, and intravitreal and intracameral amikacin were given, along with a bandage contact lens. Systemic antibiotics, amikacin and ceftriaxone, were started based on sensitivity. The inflammation is healing slowly, and the optic disc is becoming visible. The final visual acuity is hand movements close to the face at the one-month follow-up.

Conclusions: Morganella morganii post–cataract surgery endophthalmitis is a devastating complication and relentlessly progresses despite early, aggressive treatment with poor visual prognosis. This case occurred spontaneously with no known preexisting risk factors. A high degree of suspicion is required for such cases.

Abstract No.: 200374
A Vision of Vasculitis: Seeing Takayasu Arteritis (TAK) Through the Eyes

First Author: Timothy ***TANG LEE SAY***
Co-Author(s): Sabrina Adabelle ***TIU***

Purpose: TAK is a rare, chronic inflammation of large arteries. Though early symptoms are often systemic some initially exhibit ocular signs. One manifestation is Takayasu retinopathy (TR), which emerges from progressive arterial insufficiency and can lead to significant vision impairment. This report presents a case of TR, underscoring the importance of early ophthalmic evaluation and multidisciplinary management in patients diagnosed with or suspected to have TAK.

Methods: A retrospective review was done on a 21-year-old Filipino female with a two-year history of bilateral vision loss. On initial consultation, the best vision was hand movement. Anterior segment exam, gonioscopy, and fundus examination revealed ocular ischemia. Fluorescein angiography and indocyanine green angiography confirmed widespread retinal nonperfusion. Systemic evaluation revealed weak limb pulses, asymmetric blood pressure, and elevated

inflammatory markers. Computerized tomography angiography demonstrated diffuse thickening and stenosis of major aortic branches.

Results: A diagnosis of TAK was made based on established criteria. Management included high-dose corticosteroids, methotrexate, intravitreal anti–vascular endothelial growth factor injections, and panretinal photocoagulation. In TAK, reduced ocular blood flow due to arterial narrowing can cause progressive ischemic injury. TR evolves through stages, from mild vascular narrowing to proliferative changes that may lead to neovascular glaucoma. Early detection can halt progression with immunosuppressive therapy, but advanced cases frequently result in permanent visual deficits.

Conclusions: Ocular manifestations may precede systemic involvement in TAK, positioning the ophthalmologist as a key contributor to early diagnosis. Timely recognition and multidisciplinary intervention are vital to managing both ocular and systemic complications effectively.

Abstract No.: 200624
Acute Anterior Uveitis Secondary to Hyperglycemic Crisis: A Case Report

*First Author: Giancarlo Miguel **SANTOS***
*Co-Author(s): Paul Gilbert **APILADO**, Francis Ezra **LAXAMANA**, Ronnie **MANAYSAY**, Isela Angela **VELASCO***

Purpose: To report a rare case of acute anterior uveitis with hypopyon associated with markedly elevated glycemic levels.

Methods: A 55-year-old male with poorly controlled type 2 diabetes mellitus (HbA1c 15.73%) presented with a three-day onset of unilateral hypopyon, eye redness, ocular discomfort, blurring of vision, and photophobia. Initial workup focused on infectious and autoimmune etiologies, which were ruled out through comprehensive laboratory tests and imaging.

Results: Of particular significance was the immediate resolution of the hypopyon the following day after prompt correction of the hyperglycemic crisis, even before starting topical corticosteroids or antibiotics. After ten days of topical corticosteroids and cycloplegics, along with good glycemic control, there was improvement in ocular symptoms and no recurrence on follow-up.

Conclusions: This case reinforces the potential role of hyperglycemia as a precipitating factor in intraocular inflammation. It underscores the importance of considering uncontrolled diabetes as a rare trigger of uveitis, particularly when infectious and autoimmune causes are excluded.

Abstract No.: 200501
Case Report: Macular Hole Formation Following Neuroretinitis in a Young Female Patient

*First Author: Juan **LOPEZ***
*Co-Author(s): Marianne **CARABEO**, Orlando Louis **UY***

Purpose: To describe the clinical progression of a patient initially managed for atypical optic neuritis and suspected neuroretinitis, who subsequently developed a full-thickness macular hole in the left eye.

Methods: A clinical course review on a 28-year-old young female patient who presented with acute unilateral blurring of vision following a febrile illness. Clinical and fundoscopic examinations revealed bilateral optic disc edema and eventually a unilateral macular star, leading to a working diagnosis of atypical optic neuritis with consideration for neuroretinitis. The diagnostic workup included cranial and orbital magnetic resonance imaging, serologic testing, and serial macular optical coherence tomography (OCT) scans. The patient was started on high-dose intravenous methylprednisolone and oral azithromycin.

Results: Despite initial treatment, the left eye showed limited visual improvement. Fundoscopy and serial OCT revealed progressive structural changes, culminating in a diagnosis of a stage-4 macular hole. The patient maintained stable vision in the right

eye and partial recovery of color saturation and visual acuity in the left eye. A follow-up plan for surgical intervention was made, contingent upon three months of disease quiescence.

Conclusions: Neuroretinitis, although typically self-limiting, may result in significant macular complications such as a full-thickness macular hole. Prompt recognition and serial imaging are essential in guiding treatment decisions and surgical planning to optimize visual outcomes.

Abstract No.: 200632
Case Series of Patients Diagnosed With Syphilitic Optic Neuritis in a Tertiary Hospital in Mindanao, Philippines

*First Author: Mayjane Joan **TUMULAK***
*Co-Author(s): Anthea Rae **BURDEOS***

Purpose: To present cases diagnosed with syphilis presenting as optic disc edema in a tertiary hospital in the Philippines comparing clinical characteristics, laboratory findings, treatment modalities, and outcomes.

Methods: This is a retrospective case series utilizing review of charts of five patients with clinical and laboratory diagnosis of syphilitic optic neuritis, admitted and treated between December 2022 to March 2024. Clinical features, visual acuity, imaging, diagnostic work-up for infectious and autoimmune diseases, treatment, and outcomes were analyzed.

Results: This study comprised of five patients, four males and one female. The mean age was 36 + 9 months (33-40) with primary complaint of blurring of vision and pain on eye movement. Four had bilateral eye involvement and one unilateral which also presented with a relative afferent pupillary defect (RAPD). Visual acuity varied between 20/63 to counting fingers. On fundoscopy, all patients presented with swollen optic nerve head using the modified frisen scale, patients had grade 4 to 5 disc edema. All had a reactive serum venereal disease research laboratory (VDRL) test. Serum human immunodeficiency virus (HIV) antibody was positive in four patients. Other viral and bacteria panels were negative. All were treated with intravenous penicillin G, 24 million units for 10 days upon diagnosis. Improved visual acuity and disc edema were observed on day 7 of treatment. Follow-up after one week and one month from discharge with overall visual outcomes to be satisfactory.

Conclusions: This highlights that timely diagnosis and treatment with penicillin G for syphilitic optic neuritis with or without coexisting HIV decreases the chances of permanent vision loss.

Abstract No.: 201336
Choroidal Neovascular Membrane (CNVM) as a Presenting Sign of Underlying Acute Zonal Occult Outer Retinopathy (AZOOR) in a Young Filipino Female

*First Author: Kristine Margaret **BACSAL-FLORES***
*Co-Author(s): Gino Nicolo **GUANZON**, Bryan Vincent **MESINA***

Purpose: To present a case of unilateral blurring of vision (BOV) secondary to a CNVM, with multimodal imaging revealing AZOOR as the underlying cause of the disease.

Methods: A 47-year-old myopic female presented with chronic unilateral BOV and was found to have CNVM. Multimodal imaging suggested AZOOR as a possible underlying etiology.

Results: The patient presented with a visual acuity of counting fingers in the left eye. Posterior segment examination showed bilateral tessellated fundi without thinning, edema, or inflammation. A CNVM was noted in the left eye, corresponding to the vision loss, with characteristic features evident on optical coherence tomography. The patient had no known comorbidities and denied other ocular or systemic symptoms. Baseline systemic uveitis work-up was unremarkable. Multimodal imaging revealed a trizonal pattern of hyperautofluorescence and hypoautofluorescence on fundus autofluorescence, consistent with AZOOR.

Conclusions: AZOOR is a rare idiopathic chorioretinal disease often undetectable or undiagnosed on clinical examination alone.

It remains underrecognized in local literature. Comprehensive systemic and ophthalmic workup, including multimodal imaging, is essential to uncover this occult pathology. While there is no consensus for the treatment of AZOOR, patients may be started on corticosteroids to help prevent permanent retinal damage and irreversible vision loss. This case underscores the value of imaging in diagnosing, guiding therapeutic management, and monitoring progression in occult retinal disease.

Abstract No.: 201194
Clinical Characteristics and Outcomes of Exudative Retinal Detachments (ERDs) in Eyes With Acute Retinal Necrosis (ARNs)

First Author: Shabtab ***NASIR***
Co-Author(s): Mudit ***TYAGI***

Purpose: ERDs are a rare presentation in eyes with acute retinal necrosis and often may require aggressive management. This study aims to analyze the clinical characteristics of patients presenting with an ERD in the setting of an ARN.

Methods: A retrospective, observational review of cases of ARN presenting with ERD from tertiary eye care institutes in Southern and Eastern India between 2015 and 2024.

Results: A total of 319 patients with ARN were included in the study. ERD was noted in 20 eyes of 13 patients with ARN (4%). ARN involved all four quadrants in 18 eyes (90%) and three quadrants in two eyes (10%). Seven patients had bilateral ARN. Occlusive vasculitis was seen in 18 eyes (90%), vitritis in 7 eyes (35%), and disc edema in 5 eyes (25%). Intravenous methylprednisolone was given in eight patients (61.5%). All the patients were also treated with concomitant oral steroids and systemic antivirals. The mean time to resolution of ERD for all patients was 11.45 ± 4.78 days. Ten eyes (50%) also developed subsequent rhegmatogenous retinal detachment (RRD). Optic atrophy was seen in five eyes (25%), and hypotony in four eyes (20%).

Conclusions: ERDs are rare (4%) in patients with ARN. Eyes with more than three quadrants' involvement and extensive occlusive vasculitis may be more predisposed to the development of ERDs. Treatment should be aggressive, and these eyes may also need intravenous methylprednisolone under the cover of antivirals to address the severe inflammation.

Abstract No.: 200142
Comparing the Outcomes of Managing Tubercular Granulomas With Combination Versus Systemic Therapy Alone

First Author: Rashmi ***RAWAT***
Co-Author(s): Manisha ***AGARWAL****, Surabhi* ***GUPTA***

Purpose: To compare the outcomes of ocular tubercular granulomas on treatment with combination therapy versus systemic therapy alone.

Methods: A prospective interventional randomized case-control study conducted at a tertiary eye care hospital in North India. All the patients who were diagnosed as having choroidal tubercular granuloma on clinical examination, along with corroborative evidence on imaging and lab investigations, and presented to the uvea clinic from January 2022 to September 2023 were included in the study.

Results: Twenty-three eyes of 21 patients were included. Sixteen females and 5 males were included. The mean age of presentation was 28 + 12.63 years and 22 + 6.96 years. The average size of the granulomas was 5.35 ± 4.38 disc diameter (DD) and 4.44 ± 1.89 DD. The average duration for regression of granulomas was 4.5 (2-10) and 12 (4-20) weeks. The average follow-up was 12.7 (6-24) and 10.7(6-24) months. The average duration of recurrence was 19 + 11.13 and 23 weeks in the intervention group and in the control group, respectively.

Conclusions: Treating the larger vision-threatening tubercular granulomas with a combination of systemic and local therapy offers the advantage of early regression of the granulomas with better visual recovery secondary to less scarring. Recurrences are

more due to reactivation or recurrence of the retinal angiomatous proliferation (RAP)/ choroidal neovascularization (CNV) lesion, which responds to anti–vascular endothelial growth factor therapy alone. Complete flattening of the granulomas may take more than a year in both groups.

Abstract No.: 200765
Complement-Mediated Innate Immunity in Tubercular Serpiginous-Like Choroiditis (TB-SLC): First Insights From a Targeted Genetic Study

First Author: Vishali ***GUPTA***
Co-Author(s): Payal ***BAJAJ****, Reema* ***BANSAL****, Prateek* ***BHATIA****, Basavaraj* ***TIGARI***

Purpose: The complement system is a key part of innate immunity, involved in inflammation. Complement proteins are expressed by retinal pigment epithelial cells. Dysregulation of this pathway is linked to diseases such as age-related macular degeneration, diabetic retinopathy, and uveitis. However, its role in tubercular uveitis is unclear. This study investigates complement factor variations in patients with TB-SLC.

Methods: Participants included: Group A (30 TB-SLC patients), Group B (30 TB-associated uveitis without SLC), and Group C (90 healthy controls). Genomic deoxyribonucleic acid (DNA) was extracted from peripheral blood. A custom amplicon-based next-generation sequencing (NGS) panel targeting 25 complement-related genes was employed to detect single-nucleotide variants (SNVs), insertions/deletions (INDELs), and copy number variations (CNVs). Variants were annotated and mapped to different complement pathways.

Results: Distinct variant patterns were observed. Group A had more CNVs (n = 11) than SNVs/INDELs (n = 5), involving C3, C5, and CFH. Group B showed more SNVs/INDELs (n = 13) than CNVs (n = 5), affecting CFHR1/2/4, CFB, CFI, and others. Controls had five SNVs/INDELs and no CNVs. Group A variants mostly affected complement proteins, while Group B showed a balanced protein-regulator distribution. Pathway analysis revealed predominant involvement of the alternative pathway in Groups A and B.

Conclusions: This first-of-its-kind study in TB-SLC highlights the potential role of complement pathway variants in disease susceptibility and phenotype. This opens future directions for prospective validation, and in vitro animal or cell line functional studies before exploring anti-complement therapy for TB-SLC.

Abstract No.: 200231
Concordance of B-scan Ultrasonography (USG) and Optical Coherence Tomography (OCT) in Measuring Retinochoroidal Thickness Among Uveitic Eyes in a Tertiary Hospital in Manila, Philippines

First Author: Jose Carlo ***ARTIAGA***
Co-Author(s): Teresita ***CASTILLO****, Fabian Arnel* ***DE JESUS****, Rey Carlo* ***NARAVAL***

Purpose: To evaluate the accuracy of retinochoroidal thickness measurements in uveitic eyes obtained through over-the-lids B-scan USG in comparison to measurements from macular OCT.

Methods: This is a single-center, prospective cross-sectional study conducted at a tertiary hospital in the Philippines. The study included patients with uveitis in one or both eyes at any anatomic level, as defined by the Standardization of Uveitis Nomenclature, as well as patients with normal eyes. Measurements of retinochoroidal thickness in the subfoveal area were obtained using a B-scan USG machine and macular optical coherence tomography. A paired t-test was used to analyze the values obtained from both measurement techniques.

Results: A total of 33 eyes were included in the study; 17 eyes were diagnosed uveitic eyes and 16 were normal. The mean retinochoroidal thickness measured using B-scan USG and OCT was 2010.3 µm and 480 µm, respectively, with over-the-lids B-scan USG showing statistically significant values, compared to macular OCT (P = 0.0001). The mean retinochoroidal thickness between uveitic and normal eyes using the B-scan ultrasound was 2289.4 µm (standard deviation [SD]: 644.99) and 1713.8 µm (SD:

611.68), respectively, with a difference of 575.66 µm, showing a significant difference in retinochoroidal thickness readings (P = 0.0133). Retinochoroidal thickness values obtained using macular OCT were 483.82 µm (SD: 0.8061) in uveitic eyes and 477.75 µm (SD: 70.55) in normal eyes, with a difference of 6.07 µm that was not statistically significant (P = 0.8061).

Conclusions: Retinochoroidal thickness values appear overestimated when measured with over-the-lids B-scan USG, compared to macular OCT.

Abstract No.: 200630
Cytomegalovirus Retinitis in the Absence of Viremia

*First Author: Yew Sen **YUEN***
*Co-Author(s): Debbie **GOH***

Purpose: To report a case of polymerase chain reaction (PCR)–confirmed unilateral cytomegalovirus (CMV) retinitis in a patient with acute myeloid leukemia (AML), despite absence of detectable CMV viremia.

Methods: A case report.

Results: A 45-year-old female with newly diagnosed AML presented with progressive blurring of vision and floaters in the right eye. She was undergoing high-dose cytarabine (HiDAC) and midostaurin chemotherapy, complicated by neutropenia, lymphopenia, and recent hospitalization for Staphylococcus aureus bacteremia. Ophthalmic examination revealed a small peripheral area of retinitis (Zone 3) and mild vitreous hemorrhage. Despite these findings, serum CMV PCR was negative, and there were no other signs of systemic CMV disease. One week later, the patient developed worsening vitreous inflammation and keratic precipitates. Due to high clinical suspicion, an anterior chamber paracentesis was performed for tetraplex PCR (CMV, herpes simplex virus, varicella zoster virus, Toxoplasma gondii), and prophylactic intravitreal foscarnet was administered. Aqueous PCR returned positive for CMV. She was treated with intravitreal foscarnet and topical corticosteroids, with good clinical response and no need for systemic antiviral therapy.

Conclusions: CMV retinitis may occur in the absence of concurrent systemic viremia or other end-organ involvement. This case highlights the limitations of serum CMV PCR testing and underscores the importance of intraocular fluid analysis in immunocompromised patients with suspected viral retinitis. Clinicians should maintain a high index of suspicion for CMV retinitis even when serum CMV PCR is negative, as timely intraocular sampling can be critical for diagnosis and appropriate management.

Abstract No.: 201122
Demographic and Management Profile of Vogt-Koyanagi-Harada (VKH) Disease Patients in a Tertiary Eye Hospital in Bangladesh

*First Author: Md.Anwarul **AZIM***
*Co-Author(s): Md.Mominul **ISLAM**, Omar **JAFARULLAH**, Nazmus **SAKEB**, Tanzima **SIDDIKA***

Purpose: To describe the demographic characteristics and management profile of patients diagnosed with VKH disease in a tertiary eye care center in Bangladesh.

Methods: A prospective hospital-based observational study was conducted on 60 VKH patients attending the Vitreo-Retina Clinic at Ispahani Islamia Eye Institute and Hospital, Dhaka, between May and October 2023. Data were collected using a predefined protocol, including demographic details, disease classification, clinical stage, treatment modality, and visual outcomes. Statistical analysis was performed using SPSS version 23.

Results: The majority of patients were female (63.3%), with a mean age of 33.58 ± 10.2 years. All patients had bilateral disease. Based on the revised diagnostic criteria, 38.3% had complete VKH, 51.7% had incomplete, and 10.0% had probable VKH. At presentation, 63.3% of eyes were in the acute uveitic stage. The most common systemic manifestations were headache (75.0%) and tinnitus (50.0%). Common ocular complications included sunset

glow fundus (48.3%), retinal pigment epithelium clumping (43.3%), and cataract (38.3%). Visual acuity significantly improved over three months: 60.0% of right eyes and 66.7% of left eyes achieved 6/12 or better vision at the final visit compared to 15.0% and 8.3% at baseline, respectively ($P < 0.001$). Treatment included intravenous methylprednisolone followed by oral steroids and antimetabolites.

Conclusions: VKH disease in this cohort predominantly affected middle-aged females and presented bilaterally, mostly in the acute uveitic stage. Early diagnosis and aggressive immunosuppressive therapy resulted in favorable visual outcomes. Combined steroid and antimetabolite therapy was well tolerated and effective.

Abstract No.: 200537
Diffuse Unilateral Subacute Neuroretinitis (DUSN) in an Elderly Individual, From Multiple Large Visible Worms: A Case Report

*First Author: Mara Sabrina **CLEMENTE***
*Co-Author(s): Kevin Michael **DE CASTRO**, Ricardo Tobias **PAPA***

Purpose: To report a case of a 64-year-old female who had blurring of vision on the right eye, and to compare the size of worms identified in different cases of DUSN reported.

Methods: Patient with DUSN underwent fundoscopy and fluorescein angiography where two large worms were visualized.

Results: The patient was diagnosed with DUSN through the visualization of multiple large visible nematodes by fundus photography, one measuring approximately 20.68 mm and the other measuring 17 mm in length based on disk diameter. No intervention was done as the patient was lost to follow-up.

Conclusions: This case highlights the importance of direct visualization of nematodes in diagnosing DUSN. Multiple large worms were visualized in this case, much larger than the typically seen ones ranging from 0.4 to 2 mm in size. Based on the existing literature on DUSN, no prior publication has documented a case involving multiple large worms exhibiting apparent mating behaviour. Consequently, our case presents one of the largest documented instances of such worms.

Abstract No.: 201136
Effects on the Contralateral Eye Following Unilateral Dexamethasone Implant in a Patient With Bilateral Uveitic Macular Edema

*First Author: Timothy **LAI***
*Co-Author(s): Adrian **LAI***

Purpose: To describe the effects of unilateral dexamethasone implant injection on the contralateral eye in a patient with bilateral uveitic macular edema.

Methods: An interventional case report.

Results: A 57-year-old female presented with bilateral blurring of vision was found have macular edema caused by intermediate uveitis. The patient was treated with oral corticosteroid initially, but demonstrated recurrence of macular edema in both eyes upon tapering of oral corticosteroid. The patient subsequently received an intravitreal 0.7 mg dexamethasone implant in the right eye. Follow-up at two weeks post-injection revealed bilateral reduction in macular edema, with decreased central macular thickness (CMT) on optical coherence tomography (OCT) (left eye [OD]: 582 µm to 254 µm; right eye [OS]: 518 µm to 376 µm). Visual acuity (VA) also improved from 20/60 to 20/25 and 20/50 to 20/40 in OD and OS, respectively. Due to steroid-induced ocular hypertension in the right eye, the left eye was observed without a dexamethasone implant. Follow-up OCT at two months showed complete resolution of macular edema in both eyes. Follow-up 17 weeks after the unilateral injection demonstrated no recurrence of macular edema in both eyes, despite the implant having completely dissolved and without any systemic medication. At the last follow-up at nine months, her VA was 20/25 in both eyes without any recurrence of uveitis and edema, and the OCT showed normal CMT (right eye: 235 µm; left eye: 228 µm).

Conclusions: Unilateral intravitreal dexamethasone implant injection may

demonstrate bilateral therapeutic effect in patient with uveitic macular edema.

Abstract No.: 200555
Endophthalmitis After Dexamethasone Implant

*First Author: Fatemeh **SHAMS***
*Co-Author(s): Penelope **ALLEN**, Zelia **CHIU**, Rosie **DAWKINS**, Maryam **EGHTEDARI***

Purpose: Endophthalmitis is a serious complication of intravitreal injections. The dexamethasone implant is used to treat retinal pathologies such as retinal vein occlusion, diabetic macular oedema and noninfectious posterior uveitis. Recent evidence suggests that the dexamethasone implant is associated with higher rates of endophthalmitis compared to other intravitreal injections. We report findings from Australia's largest prospective study on dexamethasone implant-related endophthalmitis.

Methods: The Victorian Endophthalmitis Registry prospectively identifies all dexamethasone implant–related endophthalmitis cases from January 2018 to June 2024 in Victoria, Australia, managed at the Royal Victorian Eye and Ear Hospital. The Pharmaceutical Benefits Schedule Item Reports available on the Medicare Australia database are used to determine the number of dexamethasone implants, to calculate the incidence rate of dexamethasone implant–related endophthalmitis.

Results: Fifteen incidences from 9457 implants resulted in endophthalmitis (rate = 0.16%, or 1 in 630 injections). All cases received inpatient care with an aqueous and vitreous tap, intravitreal vancomycin, and ceftazidime. A causative pathogen was isolated in 86.7% of vitreous samples (n = 13/15), with Staphylococcus epidermidis being the most common, found in seven eyes (46.7%, n = 15). Three eyes (20%, n = 15) underwent enucleation, with average follow-up visual acuity of 20/280 (logMAR 1.15) at three months, reflecting a 0.77 (20/120) logMAR deterioration from baseline.

Conclusions: The rate of dexamethasone implant–related endophthalmitis is higher than other intravitreal injections reported in the literature, with poorer visual outcomes. The vitreous diagnostic samples are culture-positive in 93% of cases, with 46.7% isolating Staphylococcus epidermidis.

Abstract No.: 200835
Evaluation of the Intraocular Nonspecific IgE Level and Its Ratio With Serum IgE Level for the Diagnosis of Ocular Toxocariasis (OT) in Children and Adults

*First Author: Yong **TAO***
*Co-Author(s): Jing **FENG**, Shuang **ZHANG***

Purpose: To evaluate the diagnostic values of intraocular fluid (IF) nonspecific IgE level and IF/Serum IgE ratio in OT, and compare the differences between child and adult patients.

Methods: A total of 76 patients, with 52 children (<16 years) and 24 adults of clinically-diagnosed OT, and 64 patients with non-OT uveitis were enrolled in this study. The paired IF and serum samples were collected for nonspecific IgE, total IgG and specific IgG testing. The area under the receiver operating characteristic curve (AUC) was generated to assess the diagnostic performances of the above indicators.

Results: The IF IgE level was significantly higher in child patients than in adult patients (1671.79 ± 1425.97 versus 784.44 ± 544.73 ng/ml, P = 0.015). Besides, the IF/Serum IgE ratio showed a similar trend with 24.02 ± 6.10 in children and 7.68 ± 5.05 in adults (P = 0.001). For the diagnosis of child OT, the AUC of IF IgE level was comparable to that of IF specific IgG level (0.957 versus 0.994, P = 0.054). The cutoff value of IF IgE level of child OT was 13.10 ng/ml with a high sensitivity of 82.7% while the best cutoff value of 10.65 ng/ml for adult OT yielded only 66.7% sensitivity. Likewise, the sensitivity of IF/Serum IgE ratio for child OT was higher than that for adult OT (86.3% versus 60.9%).

Conclusions: Both IF IgE level and IF/Serum IgE ratio demonstrated good diagnostic performance for ocular toxocariasis and higher

sensitivity was noted for the diagnosis of child OT.

Abstract No.: 200651
From Gut to Retina: Retinitis With Retinal Vasculitis Following Typhoid Fever

*First Author: Samiksha S. **KUMAR***
*Co-Author(s): Namita C. **ANAGOL**, Pratiksha S. **KUMAR***

Purpose: The aim of this study was to assess the retinal complications following typhoid fever in a tertiary eye care centre in the Indian demographic. We evaluated its onset, management, and prognosis.

Methods: It is a noninterventional retrospective case study. Data was collected using electronic patient records. The study period was five years from 2019 to 2024.

Results: A total of seven cases of ocular inflammation post–typhoid fever were diagnosed. Two cases had bilateral retinal vasculitis with retinitis. The age range was from 49 to 69 years. Male-to-female ratio was 1:1. The retinal manifestations presented were between 4 and 6 weeks post-fever. Fever was investigated elsewhere and diagnosed as typhoid which was treated with systemic antibiotics. On presenting with retinitis and vasculitis, a complete infective and immunological work-up was done. Investigations were within normal limits. A final diagnosis of post-typhoid retinitis with vasculitis was done and patients were treated with topical and systemic steroids. All except one patient recovered vision completely, as he had macular thinning and scaring. These patients were followed for two years. No recurrence was evidenced.

Conclusions: Retinitis with retinal vasculitis is a rare manifestation post–typhoid fever. It responds well to systemic steroids and recovers completely, suggesting an immune-mediated inflammation. A high degree of suspicion, early diagnosis, and prompt treatment are associated with good prognosis. These cases reiterate the importance of a detailed history which helps us clinch the diagnosis.

Abstract No.: 200725
Hypopyon as the Sole Presentation of B-Cell Acute Lymphoblastic Leukemia (ALL) Recurrence in an Adult Male

*First Author: Quan Dong **NGUYEN***
*Co-Author(s): Frances Andrea **ANOVER**, Jiahorung **HUNG**, Celine **NGUYEN**, Christopher **OR***

Purpose: To report a rare case of leukemic hypopyon as the sole manifestation of B-cell ALL recurrence in an adult male patient.

Methods: A case report.

Results: A 68-year-old male with a history of Philadelphia chromosome-positive B-cell ALL in remission for three years presented with a one-week history of progressively worsening unilateral hypopyon, eye pain, blurring of vision, and elevated intraocular pressure (35 mmHg) in the left eye. The initial anterior chamber tap was negative for malignancy. However, due to persistent clinical suspicion, a repeat anterior chamber biopsy was performed, revealing atypical immature lymphoid cells positive for B-cell markers, confirming leukemic recurrence. Other diagnostic work-up, including complete blood count, bone marrow biopsy, and cerebrospinal fluid analysis, was negative. Imaging demonstrated localized ocular infiltration, including lacrimal gland, optic nerve, and uveoscleral involvement. The patient underwent external beam radiotherapy, systemic ponatinib, and intrathecal methotrexate. Subsequent follow-ups showed resolution of hypopyon, and resolution of choroidal metastasis on fundoscopy, but with persistently elevated intraocular pressure requiring glaucoma management.

Conclusions: Leukemic hypopyon can be considered as a rare manifestation of ALL recurrence in adults and may occur even without systemic involvement. This case highlights the importance of considering masquerade syndromes in atypical hypopyon presentations and emphasizes the critical role of repeating cytologic sampling and multidisciplinary collaboration in the diagnosis and management of cases with similar presentations.

Abstract No.: 201062
Intravitreal Triamcinolone Acetonide (IVTA) Alone as a Treatment Modality for Retinitis Post-Febrile Illness

First Author: Anup ***KELGAONKAR***
Co-Author(s): Vishal ***JADHAV***

Purpose: To describe clinical profile, imaging characteristics, visual outcomes, and resolution patterns in 36 eyes (25 cases) of retinitis post-febrile illness treated with IVTA alone.

Methods: A single-center, retrospective analysis of patients with post-febrile illness retinitis.

Results: We reported 36 eyes of 25 cases with a mean age of 41.5 years (10 unilateral, 13 bilateral). Twenty-three cases were males, while two were females. Retinitis lesions were either multifocal (n = 24) or unifocal (n = 12). All the retinitis lesions healed with variable retinal thinning. Patterns of resolution noted were centripetal and/or breadcrumb-like. Best-corrected visual acuity was 0.86 logMAR at baseline and 0.50 logMAR at the last visit ($P < 0.05$). There was statistically significant visual improvement after injection at three months follow-up. The mean resolution time of lesions was 13.25 weeks. Raised intraocular pressure was found in two eyes, whereas none developed any cataract/ endophthalmitis during the course of treatment.

Conclusions: Retinitis post-febrile illness is a terminology used to describe immune-mediated uveitic entity seen post-febrile illness. It shows distinctive morphological characteristics and is usually managed using systemic steroids with antibiotics, with good visual outcomes at the end of treatment. However, IVTA is a choice less opted for treatment. We observed overall favorable visual outcomes and anatomical outcomes after IVTA, with resolution of lesions in cases of retinitis post-febrile illness. IVTA in post-fever retinitis (PFR) was a safe alternative in our case series, negating the need for oral steroids/ antibiotics and decreasing the side effects of periocular depot steroids. Additionally, no treatment failures were noted.

Abstract No.: 200606
Management of Vogt-Koyanagi-Harada (VKH) Syndrome in Pregnancy

First Author: Nikki Regis ***DE MESA***
Co-Author(s): Albert John ***BROMEO****, John Joseph* ***DAYRIT***

Purpose: VKH syndrome is a rare, bilateral, granulomatous panuveitis that can threaten vision usually accompanied by auditory, neurologic, and integumentary manifestations. The disease is usually treated by early aggressive high-dose systemic corticosteroids. However, management during pregnancy requires balancing maternal and fetal safety. We describe the clinical course and treatment outcome of a case of VKH during pregnancy.

Methods: A case report.

Results: A 25-year-old G2P1 pregnant patient presented at 13 weeks of gestation with a three-month history of fever, myalgia, headache, and tinnitus followed by two months of bilateral blurring of vision, redness, and photophobia. On examination, the best-corrected visual acuity (BCVA) was 20/160 in the right eye and 20/100 in the left eye. Examination showed anterior chamber cells with flare, posterior synechiae, vitritis, disc hyperemia, and multifocal serous retinal detachment. The patient was diagnosed with VKH. She was started on topical prednisolone and underwent posterior sub-Tenon triamcinolone injection on both eyes. She also began a low dose prednisone at 10 mg daily under the guidance of an obstetrician. There was complete resolution of serous retinal detachment and decrease in macular thickening and leakage at one month follow-up. BCVA recovered to 20/20 in both eyes and quiescence was maintained during the course of pregnancy with no significant maternal or fetal adverse events.

Conclusions: The course of VKH may vary during pregnancy and needs close monitoring and follow-up. Treatment protocols may vary from nonpregnant patients and requires multidisciplinary collaboration.

Abstract No.: 201292
Medical and Surgical Management of Advanced Primary Antiphospholipid Antibody Syndrome (APAS) Retinopathy

*First Author: Jose Carlo **ARTIAGA***
*Co-Author(s): Robyn Gayle **DYCHIAO**, Gino Nicolo **GUANZON**, Kryzka **MEDINA***

Purpose: APAS is an autoimmune prothrombotic disorder characterized by proliferative antiphospholipid antibodies and clinical thrombosis. Initially, this ischemic retinopathy develops cotton-wool spots, retinal hemorrhages, and focal vaso-occlusions, which induce neovascularization and subsequent tractional retinal detachment (TRD) in severe cases. This paper aims to discuss the management of advanced APAS retinopathy.

Methods: A 34-year-old female patient without previously known comorbidities presented with a sudden onset of sequential painless blurring of vision. Vision in the right eye was hand movement, and in the left eye 20/105. The anterior segment and intraocular pressure were normal. The fundus of the right eye showed diffuse dehemoglobinized vitreous hemorrhage, while the left eye showed near-peripheral exudates and fibroproliferative membranes with inferior TRD.

Results: Fluorescein angiography demonstrated multifocal perivascular leakage with segmental vascular occlusion; optical coherence tomography confirmed cystoid macular edema. B-scan ultrasonography revealed dense vitreous opacities with TRD bilaterally. Elevated antinuclear antibody, silica clotting time, and the dilute Russell's viper venom time (dRVVT) test led to a diagnosis of APAS. Systemic anticoagulation with warfarin and immunosuppression with corticosteroids and azathioprine were started. Panretinal photocoagulation was done along nonperfused areas, pars plana vitrectomy for TRD, and close surveillance for neovascular complications. Visual improvement was noted in the left eye.

Conclusions: APAS retinopathy varies in presentation, and may mimic nonspecific vascular retinopathies. A high index of suspicion and tailored diagnostics may prevent aggressive sequelae and permanent visual disability. While systemic anticoagulation is the cornerstone of management, medical and surgical approaches to ischemic retinopathies may be required to treat complex cases.

Abstract No.: 200318
Medication Adherence Rates in Patients With Ocular Inflammatory Disease

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Purpose: To evaluate medication adherence patterns in patients with ocular inflammatory disease.

Methods: This cross-sectional study involving patients receiving treatment for ocular inflammatory disease via administration of a questionnaire on demographic and disease characteristics, understanding of condition and medication regimen, self-reported adherence and methods utilized to improve adherence. Accuracy of self-reported responses were validated against electronic hospital records. Univariate and multivariate analyses were performed to identify factors associated with adherence and understanding.

Results: Of the 75 patients with ocular inflammatory disease, 14 (18.7%) were evaluated to be highly adherent to their prescribed medications, despite 33 (44%) reporting no perceived barriers to adherence. Thirty-eight (50.6%) were unable to recall the purpose of their medications, despite 59 (78.6%) reporting that the purpose of their medications was clearly explained to them. Factors independently associated with good adherence rates were the ability to accurately recall their ocular inflammatory diagnosis ($P = 0.041$). Nineteen (25.3%) displayed good understanding of their ophthalmic condition and medication regimen. A higher income was independently associated with good understanding of their condition and medication regimen ($P = 0.032$).

Conclusions: Medication adherence in ocular inflammatory disease is suboptimal. Our results indicate a discordance between explained and recalled medication and condition information, impacting adherence negatively. Targeted educational interventions may be required to enhance patients' understanding and retention of key information regarding their ocular inflammatory disease and medication regimen to improve adherence.

Abstract No.: 200928
Ocular Leprosy: Socioeconomic Aspects, Clinicosurgical Features, Visual Outcomes and Associated Visual Impairment in the Last Decade

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Purpose: To determine the socioeconomic impact, demographic profile and clinical features, varied surgical interventions, visual outcomes, and World Health Organisation (WHO)–defined visual impairment associated with ocular leprosy in the last decade.

Methods: A retrospective, single center study. Demographic details, ocular and systemic treatment, socioeconomic aspects, clinicosurgical features and vision loss (pre- and post-treatment) of 29 patients (43 eyes) were analyzed. Patients presenting as a known case of leprosy or diagnosed as having leprosy based on ocular features were included.

Results: A total of 29 patients were recruited, two of whom were diagnosed with leprosy after ocular manifestation: Nongranulomatous anterior uveitis (NGAU) (n = 12), nodular scleritis (n = 6), necrotizing scleritis (n = 1), and adnexal features (n = 5) were the commonest. The mean age of patients was 56.2 years. Baseline and final follow-up best-corrected visual acuity were 1.06 and 1.04 logMAR, respectively. Diagnosed lepromatous leprosy cases were four, borderline lepromatous were two, and two were multibacillary. Seventeen cases were economically underprivileged, while only three were economically privileged. Thirteen recruited cases required nonsurgical treatment, while 16 required surgical intervention including posterior subtenon injection (5), scleral deroofing (1), corneal scraping/tissue adhesive with bandage contact lens (2), vitreous biopsy (2), ethylenediaminetetraacetic acid (EDTA) chelation (1), cataract surgery (2), dacryocystectomy (DCT) (1), descemetopexy (2), anti–vascular endothelial growth factor injections (1), and pars plana vitrectomy (2). Recurrences were accounted as NGAU-5, infectious scleritis-2, and staphyloma formation (1). WHO based visual impairment included economic (5), social (2), and legally (3) blind categories.

Conclusions: Lepromatous blindness is on the rise, with multiple cases requiring surgical intervention.

Abstract No.: 201311
Optical Coherence Tomography Angiography (OCTA) in Inflammatory Choroidal Neovascular Membrane (CNVM)

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Purpose: To study CNVM and its characteristics in inflammatory uveitis patients using a noninvasive tool of investigation i.e., OCTA, and to determine the importance and role in the management protocol.

Methods: Fifteen eyes of thirteen patients were studied within the age group of 9 to 73 years (median 36 years). Nine patients had active uveitis, whereas four had healed uveitis. The patients were grouped into categories based on anatomical diagnosis (posterior or panuveitis), location of CNVM (juxta foveal, peripapillary, and subfoveal), and etiology (toxoplasmosis, sarcoidosis, tuberculosis, and idiopathic). The images taken by Angiovue OCTA and RTVue XR were studied at all slab levels, and capillary nonperfusion areas and vascular changes were noted. Local fractal analysis was applied to the images. Tear cytokine analysis was also done in selected cases.

Results: Deep layer in the healed CNVM had lower mean vessel density compared to the controls and active CNVM (P < 0.001). Large spaces in deep layer had increased in healed CNVM compared to controls and active CNVM (P = 0.001). Small vessel spacing had increased in healed CNVM significantly compared to controls and active CNVM (P = 0.013). Deep vessel density had the highest area under the curve (0.90 ± 0.04) compared to other vascular parameters analyzed. Capillary-free zones had increased in active CNVM eyes compared to normal eyes.

Conclusions: Capillary free zones had increased in active CNVM eyes compared to normal eyes. OCTA can be used as a noninvasive diagnostic tool in the diagnosis and management of inflammatory CNVM.

Abstract No.: 201231
Phacoanaphylactic Endophthalmitis Following Blunt Ocular Trauma

*First Author: Nikki **DE MESA***
*Co-Author(s): Albert John **BROMEO**, Christian **SEVILLA***

Purpose: Lens-induced uveitis (LIU) is an uncommon autoinflammatory condition which may arise from immune exposure to lens proteins, most commonly following traumatic or surgical lens injury. It commonly presents with anterior segment inflammation and secondary glaucoma. However, posterior segment inflammation may also rarely arise and can mimic a noninfectious endophthalmitis, termed phacoanaphylactic endophthalmitis. We present the diagnosis and management of a case of phacoanaphylactic endophthalmitis following traumatic lens rupture.

Methods: A case report.

Results: A 72-year-old male developed painful blurring of vision in the left eye following blunt trauma. Examination revealed keratic precipitates, a mature cataract with phacodonesis, anterior chamber cells, and posterior synechiae associated with elevated intraocualr pressure (IOP). Anterior segment optical coherence tomography (ASOCT) and ultrasound biomicroscopy (UBM) confirmed anterior lens capsule rupture. B-scan showed vitreous echogenicities suggesting vitritis. The patient was diagnosed with phacoanaphylactic endophthalmitis and started on topical corticosteroids, cycloplegics, and glaucoma medications as well as a course of oral corticosteroids. On follow-up, there was significant improvement in anterior segment inflammation as well as resolution of vitritis. The patient was definitely managed with cataract extraction. Postoperatively, there was no recurrence of inflammation with significant improvement in vision.

Conclusions: Early clinical recognition and targeted therapy are essential in the management of lens-induced uveitis. Multimodal imaging modalities such as ASOCT and UBM greatly aid in diagnosis. While temporizing measures include IOP reduction and anti-inflammatory treatment, lens extraction is the definitive means of uveitis control in these patients.

Abstract No.: 200573
Rare Bilateral Acute Posterior Multifocal Placoid Pigment Epitheliopathy (APMPPE) in a Filipino Patient with Positive Interferon-Gamma Release Assay (IGRA) and Purified Protein Derivative (PPD) Test

*First Author: Jessica **ABAÑO***
*Co-Author(s): Jocelyn **SY**, Pauline Andrea **WONG***

Purpose: To report a case of APMPPE in a Filipino patient with positive IGRA and PPD test.

Methods: This is a case report of APMPPE in a patient with positive IGRA and PPD test.

Results: A 24-year-old Filipino male presented with a complaint of peripehral scotomas on the left eye. Best-corrected visual acuity (BCVA) was 20/20 on the right eye and 20/30 on the left eye. Funduscopy of both eyes revealed mild vitritis and multifocal yellowish hypopigmented patches scattered at the posterior pole and retinal midperiphery. Fluorescein angiography of both eyes revealed early hypofluorescent

lesions with hyperfluorescent staining. Optical coherence tomography (OCT) of the left eye demonstrated disruption of the outer retinal layers and nodular irregularities of the external hyperreflective band. OCT angiography revealed macular ischemia on the left eye. Laboratory exams revealed a positive Mycobacterium tuberculosis PPD skin test (12 mm) and positive IGRA test. Anti-Koch therapy was initiated, but BCVA of the left eye declined to 20/400, prompting systemic corticosteroids and adjunctive therapy (pentoxifylline, lutein, and alpha lipoic acid). Vision gradually improved to BCVA 20/60 over the subsequent weeks.

Conclusions: This is the first described case of bilateral APMPPE with positive IGRA and PPD test. In tuberculosis-endemic regions such as the Philippines, white dot syndromes may be underdiagnosed, especially in patients with positive tuberculosis screening tests.

Abstract No.: 201228
Real-World Application and Predictability Quotient of Endophthalmitis Infectivity Measurement Algorithm (EIMA) in Post-Cataract Acute Endophthalmitis

*First Author: Taraprasad **DAS***
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Purpose: To describe the predictability quotient of EIMA in post-cataract acute endophthalmitis in terms of predictive value, sensitivity, and specificity.

Methods: This was a retrospective agreement and predictive analysis of cases clinically diagnosed with endophthalmitis in a tertiary eye care network. Data noted included the elements of the EIMA algorithm such as corneal clarity, hypopyon level, anterior chamber clarity, and presenting vision. Each case was graded as per the algorithm into EIMA positive (where EIMA suggested culture-positive endophthalmitis) and EIMA negative (where it did not). An agreement was sought between decisions as per EIMA, clinical decision made, and culture positivity. Sensitivity, specificity, positive predictive value, and negative predictive value were also calculated for EIMA, taking culture as the standard.

Results: Fifty-eight eyes were included. The mean scores for corneal clarity, Anterior chamber hypopyon and presenting vision in logMAR were 1.91 ± 1.29, 1.05 ± 1.07, and 4.77 ± 4.27, respectively. The Cohen kappa for agreement between EIMA-based and clinic-based decisions was 0.35 (P = 0.02), that for EIMA and culture results was 0.34 (P =0.00013), and that for clinical decision and culture result was 0.1 (P = 0.14). Sensitivity and specificity of the decision as per EIMA compared to culture results were 100% and 38%, respectively. Positive and negative predictive values of EIMA compared to culture results were 54% and 100%, respectively.

Conclusions: EIMA has a fair agreement with culture positivity in endophthalmitis. A high negative predictive value and sensitivity make EIMA a strong tool to rule out endophthalmitis and unnecessary referrals.

Abstract No.: 200486
Retinal Vasculitis in Bangladesh: A Snapshot of Late-Stage Disease in a Tuberculosis (TB)-Endemic Population

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Purpose: To evaluate the epidemiology, etiology, and treatment outcomes of retinal vasculitis cases presenting at a tertiary eye hospital in Bangladesh, with a focus on TB-related disease and surgical burden due to late-stage presentation.

Methods: This prospective observational study was conducted from January to June 2022 at the Ispahani Islamia Eye Institute and Hospital, Dhaka. Fifty patients diagnosed with retinal vasculitis were evaluated through detailed history, ocular and systemic examination, fluorescein angiography, and targeted investigations (Mantoux, chest X-ray, venereal disease research laboratory [VDRL] test, treponema pallidum hemagglutination

assay [TPHA] test, and serologies). Disease was staged clinically, and treatment categorized.

Results: The mean patient age was 38.8 ± 13.7 years, with a male predominance (58%) and 60% from rural areas. Unilateral disease was more common (58%). TB was the leading cause (52%), followed by idiopathic (28%), viral (10%), syphilis (6%), sarcoidosis (2%), and Behçet disease (2%). Over 50% presented in stage IV, with complications such as vitreous hemorrhage or tractional retinal detachment. Surgery was required in 46% of cases. Only 14% could be managed conservatively, and 12–16% with injection and/or laser.

Conclusions: Retinal vasculitis in this cohort was frequently associated with TB and delayed referral, leading to advanced-stage disease requiring surgical intervention. This reflects the lack of awareness, rural barriers, and late systemic screening in TB-endemic areas. Early diagnosis, public education, and multidisciplinary uveitis care are essential to reduce vision loss in such patients.

Abstract No.: 201371
Saturday Night Retinopathy From Methamphetamine Abuse in an Adult Filipino Male

*First Author: Bryan Vincent **MESINA***
*Co-Author(s): Anthony Robert Patrick **LIM***

Purpose: To present a rare case of ischemic retinopathy secondary to drug abuse.

Methods: This is a case report that details the presentation and diagnostics findings of a patient with Saturday night retinopathy.

Results: A 29-year-old male came to a consult for a 13-day history of sudden blurring of vision of the right eye. Fourteen days prior to consultation, he had used intranasal methamphetamine just before passing out face-down and woke up around six hours later, complaining of pain, blurry vision, throbbing right-sided headache. Upon consultation, his right eye had a visual acuity of no light perception, with hyperemic conjunctiva, chemosis, and a nonreactive pupil with a relative afferent pupillary defect. Fundoscopy revealed a pale retina, grade 5 optic disc edema, tortuous and attenuated vessels, subretinal hemorrhages, and soft exudates. Fluorescein angiography was done, and no retinal and choroidal filling was noted for the right eye. Cranial computed tomography scan revealed a thickened right optic nerve. Ischemic and immunologic diagnostics were all unremarkable. He was managed conservatively with topical corticosteroids and cycloplegics. There was resolution of the inflammation, but vision never recovered.

Conclusions: Saturday night retinopathy is a rare form of ocular ischemia. It is a blinding condition presenting with transient orbital congestion, ophthalmoplegia, and retinal ischemia. In patients with a lack of comorbidities causing ischemic retinopathy, a thorough history is vital in identifying risk factors such as substance abuse. Although prognosis is poor for the affected eye, the systemic and mental effects of methamphetamine warrant further monitoring.

Abstract No.: 201363
Scleritis and Peripheral Ulcerative Keratitis (PUK) as Presenting Signs of Granulomatosis With Polyangiitis (GPA) in a Tertiary Hospital in Manila

*First Author: Ruben **LIM BON SIONG***
*Co-Author(s): Tara Pamela **MENDOZA**, Bryan Vincent **MESINA***

Purpose: GPA frequently causes ocular inflammation and is the prototype of small-vessel vasculitis with ocular manifestations. Currently, there is limited data on GPA in Asian patients.

Methods: This is a report of a patient with GPA presenting with scleritis and PUK, with a review of diagnosis and management.

Results: A 42-year-old Filipino female with a year of history of sudden-onset left eye redness, photophobia, discharge, tearing, and blurred vision. She noted concomitant nasal congestion, discharge, and dyspnea. On examination, she had poor vision in the left eye, with ciliary injection, diffuse scleral

thinning, and a corneal melt. Her right eye only had scleral thinning. Systemic physical examination revealed a saddle-nose deformity. Laboratory testing revealed a positive c-ANCA and a pulmonary granuloma on chest X-ray. Treatment initiated included topical steroid and antibiotic drops, systemic corticosteroids and immunomodulators. Her condition has since been stable.

Conclusions: A high index of suspicion for autoimmune vasculitides is warranted in patients presenting with necrotizing scleritis and PUK. The high incidence of ocular manifestations in GPA necessitates prompt recognition and timely referrals to subspecialists to guide workup and initiation of treatment to reduce the risk of visual loss, morbidity, and mortality.

Abstract No.: 201323
Seeing is Believing: A Case of Vitreous Biopsy-Proven Intraocular Lymphoma in a Philippine Tertiary Hospital

*First Author: Brylle **CATAGUE***
*Co-Author(s): Bryan Vincent **MESINA***

Purpose: Diagnosing intraocular lymphoma remains a challenge as it clinically imitates uveitis. Currently, there are no established guidelines in the diagnostic management of intraocular lymphoma. This case report presents an effective method of vitreous sampling for patients with suspected intraocular lymphoma.

Methods: A case report and review of related literature.

Results: A 46-year-old female consulted in our clinic with a three-month history of blurred vision, floaters, and headaches. She was initially managed as a case of uveitis but did not improve on steroid and antibiotic therapy. She eventually developed seizures, which increased the suspicion of a central nervous system (CNS) lymphoma. A high index of suspicion prompted a vitreous biopsy to be done. Three-port pars plana approach, with large-bore cutter, and a cut rate of 1000-1500 cuts per minute were employed. One mL each of pure and diluted vitreous was sent to surgical pathology within 30 minutes, observing slow and careful handling to avoid damage to lymphoma cells. Intraoperatively, four smears each of pure and diluted vitreous fixed in 95% ethanol in 1:1 ratio were sent to pathology. Cytology revealed atypical lymphoid proliferation suspicious for hematolymphoid proliferation. Immunohistochemistry showed strong diffuse CD20 staining compatible with a primary diffuse large B-cell lymphoma.

Conclusions: Diagnosing intraocular lymphoma remains a challenge, as most biopsies yield a negative result. This case illustrates an effective method of acquiring vitreous samples in patients with suspected intraocular lymphoma to ultimately arrive at the correct diagnosis and institute therapy early in the disease process.

Abstract No.: 200334
Small-Gauge Pars Plana Vitrectomy (PPV) for Exogenous Endophthalmitis: Visual Outcome and Prognostic Factors in a 10-Year Experience

*First Author: Chung-hao **HSIAO***
*Co-Author(s): Chia-jen **CHANG**, Hung-ju **CHEN**, Yuan-shao **CHENG**, Shih-chao **FENG**, Wen-jung **LO***

Purpose: To evaluate the visual outcomes and prognostic factors associated with PPV using small-gauge techniques in patients with exogenous endophthalmitis over a 10-year period at a tertiary center in Taiwan.

Methods: Medical records were reviewed for demographics, clinical presentation, etiology, microbiology, surgical parameters, and postoperative outcomes. Visual acuity (VA) was recorded preoperatively and at the final follow-up. Prognostic factors were analyzed using univariate and correlation analyses.

Results: The median final VA improved significantly from the logarithm of the minimum angle of resolution (logMAR) 2.30 to 1.78 ($P = 0.004$), with 51.1% of eyes showing visual improvement and 24.4% achieving VA better than Snellen 6/12. The leading cause of infection was cataract surgery (75.6%). Positive vitreous cultures were found in 43.6% of cases,

with Staphylococcus epidermidis being the most common pathogen. Worse final VA was significantly associated with male gender (P = 0.042), poor initial VA (P < 0.001), positive cultures (P = 0.037), and intraoperative retinal detachment (P = 0.009). Favorable outcomes were associated with 27-gauge vitrectomy (P = 0.044) and post-cataract etiology (P = 0.006). The most frequent complication was epiretinal membrane (20%).

Conclusions: Small-gauge PPV offers significant visual improvement for exogenous endophthalmitis, particularly in cases with favorable baseline vision and post-cataract etiology. Use of 27-gauge vitrectomy is associated with better outcomes. Prognostic factors such as poor initial vision, virulent infection, and retinal detachment should inform surgical decision-making and patient counseling.

Abstract No.: 200146
Surgical Treatment of Acute Postoperative Endophthalmitis

First Author: Ivan ***FROLYCHEV***

Purpose: To analyze of the results of treatment of acute postoperative endophthalmitis with verification of the main pathogens.

Methods: Fifty-five patients (55 eyes) with acute postoperative endophthalmitis were treated. When endophthalmitis occurred, 10 patients (18.2%) had objective vision preserved, 17 patients (30.9%) had vision reduced to counting fingers on the face, 23 patients (41.8%) had vision to pr.l.certa, and 5 patients (9.1%) had vision to pr.l.incerta. All patients were treated using the developed technology. All underwent vitrectomy with perfluorodecalin filling of the vitreal cavity. After suturing the punctures, vancomycin 1 mg and ceftazidime 2.25 mg were administered intravitreally. The period of tamponade of the vitreous cavity with perfluorodecalin was 5 to 12 days, then it was removed. Additionally, before starting the treatment, the material was taken for bacteriological examination.

Results: Visual functions were preserved in 52 patients (94.5%). In 40 patients (72.7%), the best-corrected visual acuity (BCVA) improved to 20/50 or better. Eight patients (14.5%) had BCVA above 20/25. There was no recurrence of inflammation, but the indicators of laser-induced damage to the blood-retinal barrier persisted for 6 months after treatment in all cases. The average protein flux was 14.6 photons per millisecond, with a range from 8.4 to 19.2 (P = 0.002).

Conclusions: The use of technology, such as filling the vitreous cavity with perfluorodecalin and administering antibiotics intravenously, has made it possible to achieve a high bactericidal effect and excellent functional outcomes in the treatment of endophthalmitis. The best results have been achieved in cases of endophthalmitis caused by Staphylococcus.

Abstract No.: 200496
The Hidden Clue: Syphilitic Retinitis Masquerading as Central Serous Chorioretinopathy (CSC)

First Author: Tung ***MAI QUOC***
Co-Author(s): Kien ***KHUAT TRUNG****, Quynh* ***NGUYEN THI VAN***

Purpose: To present a challenging case of syphilitic retinitis mimicking CSC, highlighting the importance of thorough differential diagnosis and timely intervention to prevent vision loss.

Methods: A detailed clinical evaluation was performed, including history taking, comprehensive ophthalmic examination, and multimodal imaging such as fundus photography, optical coherence tomography, fluorescein angiography, and fundus autofluorescence. Laboratory tests for syphilis serology and viral screening were conducted to confirm the diagnosis. The patient was followed up to assess response to appropriate antibiotic, antiviral, and adjunctive therapies.

Results: The patient initially presented with clinical features and imaging findings suggestive of CSC. However, positive syphilis serology and concomitant human

immunodeficiency virus (HIV) coinfection confirmed the diagnosis of syphilitic retinitis. Following treatment with intramuscular penicillin, adjunctive corticosteroids, and antiviral therapy, significant improvement in visual acuity and retinal inflammation was observed during follow-up. Notably, new peripheral retinal venous dilations developed despite treatment, indicating ongoing vascular involvement that requires careful monitoring.

Conclusions: Syphilitic retinitis can mimic CSC, posing a diagnostic challenge. Comprehensive clinical evaluation and appropriate serological testing are essential for accurate diagnosis. Early recognition and prompt treatment, especially in patients with concomitant HIV infection, are crucial to achieving favorable visual outcomes and preventing disease progression. Importantly, the development of new peripheral retinal venous dilations despite treatment underscores the need for meticulous and continuous retinal monitoring to detect and manage vascular complications early.

Abstract No.: 200370
The Spectrum of Vogt-Koyanagi-Harada (VKH) Disease in a Tertiary Eye Care Center of Bangladesh

*First Author: Jasmin **AHMAD***

Purpose: The aim of this report was to provide a detailed description of the clinical profile, management, and outcome of VKH disease in patients of Bangladesh (a homogeneous population of patients).

Methods: A retrospective review of all the patients with VKH disease presented to our institute between January 2001 and December 2005 was carried out. A standard data acquisition form was used for the analysis of demographic and clinical features. Their history, ocular findings at initial and final visits, treatment with response and ocular complications were noted from the record.

Results: The study cohort consisted of 31 VKH patients. Among them, 19 (61%) were women with a mean age of 37.58 (standard deviation [SD] = ±13.49) years (range 18 to 66 years). All cases were bilateral. Thirty-three (55%) patients had a final visual acuity of better than 6/9 and only 10 (16.67%) had worse than 6/60. Visual acuity was significantly improved (P = 0.0001) after treatment. All patients were treated with systemic corticosteroids for an average of six months, but treatment was prolonged for years in patients who developed chronic uveitis. We observed at least one complication in 46 (74.19%) eyes.

Conclusions: VKH disease is not rare in Bangladesh. Most patients with VKH seem to be late referrals. Ocular complications were common. Early detection and prompt management may prevent many visual disabilities in VKH cases.

Abstract No.: 201192
The Truth About Syphilis: Does the Masquerade Also Follow Patterns

*First Author: Shravya **CHOUDHARY BALLA***
*Co-Author(s): Mudit **TYAGI***

Purpose: To analyze the common clinical phenotypes of ocular syphilis, and to identify their common clinical presentations.

Methods: A retrospective review of all cases of ocular syphilis in a tertiary hospital in India between 2014 and 2024. The presenting clinical features, along with demographics, investigations, and imaging features, were analyzed.

Results: A total of 104 eyes of 69 patients with a mean age 38.2 ± 10.6 years were included. All tested positive for the Treponema pallidum hemagglutination assay. The Venereal Disease Research Laboratory (VDRL) test was negative in 30% of cases (18 patients out of 59 tested patients). Distribution of clinical phenotypes was as follows: retinitis (81.1%, n = 56 patients), retinal vasculitis (18.8%, n = 13), optic nerve involvement (11.6%, n = 8), scleritis (7.2%, n = 5), intermediate uveitis (7.2%, n = 5), and anterior uveitis (2.8%, n = 2). Among retinitis patients (n = 56), the most common presentation was placoid chorioretinitis (66%, n = 37), followed by superficial punctate military lesions (26.8%, n = 15) and ground

glass retinitis (17.8%, n = 10). Miliary lesions were more common in eyes which had earlier received inadvertent steroids erroneously. Sixty-nine individuals tested positive for human immunodeficiency virus (55.8%, n = 38).

Conclusions: Despite being recognized for its protean manifestations, the clinical phenotypes of ocular syphilis are largely dominated by various retinal lesions. Placoid chorioretinitis and punctate miliary lesions are the two most common characteristic clinical phenotypes.

Abstract No.: 200701
Transvitreal Fibrinoid Syndrome

*First Author: Siddhartha **RAO B S***
*Co-Author(s): Keerthana **KASI**, Nawazish **SHAIKH***

Purpose: To highlight the clinical presentation, management, resolution, and outcome of transvitreal fibrinoid syndrome following vitrectomy in a patient with advanced proliferative diabetic retinopathy, and to differentiate it from infectious endophthalmitis.

Methods: A 57-year-old male presented with unlasered proliferative diabetic retinopathy in both eyes. The right eye had tractional retinal detachment with neovascular glaucoma; the left eye had nonresolving vitreous hemorrhage. Visual acuity was light perception with inaccurate projection in the right eye, and hand motions (HM) close to face with accurate projection in the left. The left eye received preoperative intravitreal anti–vascular endothelial growth factor. After 24 hours, the left eye underwent 25-gauge pars plana vitrectomy with endolaser and fluid-air exchange. Standard postoperative therapy included topical antibiotics, corticosteroids, and cycloplegics.

Results: On postoperative day 1, the left eye had visual acuity of HM close to face, intraocular pressure of 16 mmHg, and a 360-degree visible and adequately lasered retina. By postoperative day 3, a dense transvitreal fibrinoid reaction was noted with an 80% air fill, but without signs of pain, lid edema, or hypopyon. The retina was visible through the bands with no vitreous cells. Intensive topical corticosteroids were instituted with low-dose oral corticosteroids under glycemic monitoring. By day 15, membranes had resolved and visual acuity improved to 20/60.

Conclusions: Transvitreal fibrinoid syndrome is a rare, sterile inflammatory reaction that mimics endophthalmitis in the early postoperative period. High clinical suspicion, prompt recognition and corticosteroid therapy can lead to full resolution with favorable visual outcomes.

Abstract No.: 201140
Utility of Next Generation Sequencing in the Diagnosis and Management of Infectious Uveitis: A Retrospective Case Series From a Tertiary Eye Center

*First Author: Wei-chi **WU***
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Purpose: To evaluate the diagnostic utility of next-generation sequencing (NGS) in identifying infectious agents in patients with suspected infectious uveitis and its impact on clinical management.

Methods: This retrospective case series included 19 patients who underwent NGS testing of intraocular fluid samples between March 2020 and February 2025 at a tertiary eye center. Demographic data, clinical presentation, results from conventional diagnostic tests, NGS findings, treatment changes, and surgical outcomes were analyzed. The diagnostic yield of NGS was compared with traditional diagnostic methods, and its influence on therapeutic decisions was assessed.

Results: NGS identified potential pathogens in 18 of 19 cases (94.7%), including uncommon organisms such as Massilia sp., Penicillium citrinum, and Malassezia restricta. In contrast, conventional methods were positive in only five cases (26.3%). NGS results influenced management in 32% of patients, leading to changes in antimicrobial therapy or supporting ongoing treatment. Vitrectomy was performed in 14 patients; one case required enucleation.

Among 19 patients with follow-up visual acuity data, 8 (42.1%) improved, 5 (26.3%) remained stable, and 6 (31.6%) worsened.

Conclusions: NGS significantly improves diagnostic accuracy in infectious uveitis, particularly when conventional methods are inconclusive. By detecting rare pathogens and guiding targeted therapy, NGS contributed meaningfully to clinical decision-making. These findings support its integration into diagnostic algorithms for complex or culture-negative uveitis cases.

Abstract No.: 200749
Vector-ious: A Case Report on Infectious Neuroretinitis

*First Author: Victor Ephraime **PAULINO***
*Co-Author(s): Jamie Lynne **CHING-NARCISO**, Oliver **LISTANO**, Joel **PEREZ**, Jeffrey Naz **RACOMA***

Purpose: This case serves to contribute to incidence reporting and profiling of unilateral infectious neuroretinitis in Filipinos caused by the dengue virus, albeit rare. Consequently, it aims to serve as an outline for the timing of treatment and further management of patients diagnosed with dengue fever presenting with visual signs and symptoms similar to the case presented, as well as to add information in disease prognostication.

Methods: Dengue fever, while being a viral epidemic disease in some parts of the world, is endemic in the Philippines. While systemic manifestations are well researched and documented, ocular manifestations of dengue fever are uncommon, with posterior pole involvement presenting even rarer. Proposed mechanisms include direct viral infection as well as immunologic phenomena. Whenever present, ocular complications associated with dengue fever manifest as bilaterally.

Results: A 53-year-old male presenting with unilateral, painless, generalized blurring of vision of the right eye with decreased in color contrast and sensitivity. A 14-day history of mosquito bite, followed four days after by nonspecific flu-like illness resembling dengue fever. Laboratory testing yielded the presence of dengue virus antibodies, IgG and IgM. Steroid therapy was initiated with the improvement of vision.

Conclusions: In endemic areas, unilateral neuroretinitis can manifest as a dengue fever sequela and should be considered as part of the differentials whenever a patient presents with visual symptoms. Progressive improvement of visual acuity after a three-day intravenous methylprednisolone, followed by a 10-day oral prednisolone tapering therapy, was shown and may be used in cases with a similar presentation.

Ocular Imaging

Abstract No.: 201370
Choroidal Thickness in Normal Indian Eyes Using Swept-Source Optical Coherence Tomography

*First Author: Mahesh **CHANDRA***
*Co-Author(s): Amber **BHAYANA**, Vinod **KUMAR**, Devesh **KUMAWAT***

Purpose: To provide a normative database for subfoveal choroidal thickness in Indian eyes using swept-source optical coherence tomography.

Methods: This is a cross-sectional study based at a tertiary eye care center in Northern India. Two hundred and thirty-eight eyes of 119 healthy subjects were examined in terms of axial length, spherical equivalent, and choroidal thickness. Inclusion criteria included age 19–60 years, no retinal or choroidal disorder, and patients with clear media and good fixation. Patients with high hypermetropia (>4 diopters [D]) or myopia (>6 D) or any systemic disease likely to affect choroidal thickness were excluded. Twelve radial line scans were obtained centered on the fovea which were used to calculate choroidal and retinal thickness in 9 Early Treatment Diabetic Retinopathy Study (ETDRS) zones.

Results: The mean age of all the subjects was 28.70 ± 11.28 years; mean axial length

was 23.63 ± 1.96 mm, and mean spherical equivalent was −0.92 ± 3.08 D. The mean subfoveal choroidal thickness was 299.10 ± 131.2 μ and the mean foveal thickness was 239.92 ± 48.16 μ. A negative correlation was found between subfoveal choroidal thickness and age (r = −0.0961, P = 0.1392) and axial length (r = −0.3166, P < 0.001). A statistically significant positive correlation was found between subfoveal choroidal thickness and refractive error (r = 0.2393, P = 0.0002).

Conclusions: This study provides normative database for subfoveal choroidal thickness and foveal thickness using swept-source optical coherence tomography. The choroidal thickness measured with swept-source platform is slightly higher than that reported with spectral domain platforms.

Abstract No.: 200458
Correlation Between Ultra-Widefield Angiography (UWFA) and Optical Coherence Tomography Angiography (OCTA) in Retinal Vein Occlusion (RVO) Post Loading Doses of Anti–Vascular Endothelial Growth Factor (Anti-VEGF) in RINSE Study

*First Author: Pallavi **RAJ***
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Purpose: Adequate measurement of the nonperfusion area (NPA) is critical in the management of RVO. The aim of the study was to compare the relationship between the NPA on ultra-widefield fluorescein angiography (UWF-FA) and the nonflow area (NFA) on OCTA in RVO.

Methods: A cross-sectional study of patients undergoing treatment for RVO as per RINSE (Ranibizumab INjection and Steroid implant Ozurdex with lasEr photocoagulation protocol). Postcompletion of three loading doses of anti-VEGF, NPA and ischemic index (ISI) were quantified on UWFA; NFA, vessel density, and the size of the foveal avascular zone on 3 x 3 mm OCTA were measured. The association of the NPA and ISI on UWWFA and the parameters on OCTA were analysed in 52 patients.

Results: The NPA and ISI on UWF-FA were significantly correlated with the NFA on OCTA in RVO (r-value: 0.878, 0.780 [P < 0.01]). The vessel density of the temporal quadrant was negatively correlated with NPA and ISI.

Conclusions: NPA in the peripheral retina was correlated with NFA in macula. NFA detected by OCTA could be an indicator of the ischemic status in RVO.

Abstract No.: 200799
Correlation of the Macular and Peripapillary Vessel Densities With Visual Field Mean Sensitivity (VFMS) in Primary Open-Angle Glaucoma With High Myopia

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Purpose: Diagnosing and monitoring glaucoma in highly myopic eyes presents significant challenges. Vascular density (VD) measurements are less susceptible to the retinal and optic nerve head changes due to high myopia. This study evaluated the macular and peripapillary VDs, and their correlations with VFMS in patients with primary open-angle glaucoma and high myopia.

Methods: This observational cross-sectional study was performed on 40 primary open-angle glaucoma eyes with high myopia. Macular VDs, ganglion cell–inner plexiform layer thicknesses (GCIPLT), peripapillary VDs, and retinal nerve fiber layer thicknesses (RNFLT) were measured. The global and sectoral correlations with VFMS of these indices were assessed.

Results: The macular global, inner, and outer VDs were 34.38 ± 8.15%, 35.00 ± 8.79%, and 34.91 ± 8.33%, respectively. The peripapillary global, superior, nasal, inferior, and temporal VDs were 35.44 ± 4.55%, 34.96 ± 4.51%, 34.91 ± 4.22%, 35.29 ± 4.85%, and 36.33 ± 5.33%, respectively. The outer global VD correlated with the corresponding VFMS (P = 0.026). The macular inferior VFMS correlated with the macular outer inferior VD (P = 0.001), more strongly than with the corresponding

GCIPLT. Both the peripapillary global VFMS and the VFMS of all sectors correlated with the corresponding peripapillary VDs (all P < 0.001), more strongly than with the corresponding RNFLT.

Conclusions: VD is a necessary adjunct to GCIPLT and RNFLT to monitor the progression of glaucomatous visual field defects in highly myopic eyes, especially in the outer inferior macula and the global, superior, nasal, inferior, and temporal peripapillary regions.

Abstract No.: 200116
Determination of the Mean Macular Foveal Avascular Zone (FAZ) Size and Vascular Density Using Optical Coherence Tomography Angiography (OCTA) Among Healthy Adult Patients Seen in a Level 3 Government Hospital in the Philippines

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Purpose: The FAZ and retinal vascular densities in the superficial and deep vascular plexuses (SVP, DVP) are key indicators of retinal health and are relevant in diagnosing conditions such as diabetic retinopathy and glaucoma. OCTA offers a noninvasive way to measure these parameters. Despite its potential, no studies have focused on OCTA parameters in Filipino eyes. This study aims to contribute to local data on FAZ size and vascular densities, exploring the potential use of OCTA for early detection of retinal diseases. It also examines correlations between the FAZ size, vascular density, age, and sex, highlighting the need for ethnicity-specific clinical guidelines.

Methods: A cross-sectional study included 90 eyes from 45 adults with best-corrected visual acuity ≥20/40 and normal fundus exams. OCTA (Optovue Solix) was used to measure FAZ size and SVP/DVP densities. Statistical analyses evaluated differences by laterality, sex, and age.

Results: The mean FAZ size was 0.32 mm^2, with no significant difference between eyes (P = 0.178) or sexes (P = 0.737). SVP and DVP densities averaged 48.87% and 52.09%, respectively. Only DVP density significantly declined with age (r = –0.307, P = 0.040). Compared to other ethnicities, FAZ size in Filipinos was larger than in East Asians but similar to Caucasians and Africans.

Conclusions: The FAZ size and SVP density remained stable across age and sex, while DVP density declined with age, which is consistent with global trends. The ethnic variation observed in FAZ values highlights the need for population-specific OCTA reference standards in retinal evaluation.

Abstract No.: 200694
Development of an Automated Artificial Intelligence (AI) Algorithm to Extract Diagnosable Frames From Smartphone Funduscopy Videos

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Purpose: To develop and validate an AI algorithm that automatically extracts diagnostically useful frames from video sequences captured using smartphone-based funduscopy, thereby enhancing clinical usability in image-based retinal screening.

Methods: Fundus videos were collected and annotated to distinguish frames suitable for diagnosis. A deep learning-based AI model was trained on a dataset with a class imbalance of 0.142 (positive:negative = 44,147:266,597), and the model's ability to select relevant frames was evaluated under three training configurations: no positive image augmentation, addition of 89 positive images (previous), and full augmentation with 574 positive images (current).

Results: Test performance under the current setting (all positive samples added) showed an accuracy of 0.8195, area under the curve (AUC) of 0.8504. Accuracy specificity and AUC remained high, indicating robust diagnostic frame extraction. Furthermore, Grad-CAM

allowed AI to see what ophthalmologists wanted to see.

Conclusions: The developed AI algorithm can accurately identify diagnostically useful frames from smartphone funduscopy videos. With minimal additional training data, the system demonstrated clinically relevant performance and may facilitate remote ophthalmic screening where expert assessment is limited.

Abstract No.: 200946
Drusen Detection Using Retromode Imaging

*First Author: Pragati **RAJ***
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Purpose: To assess drusen quantification using retromode imaging in age-related macular degeneration (AMD) patients and compare with multicolour imaging and swept-source optical coherence tomography (SDOCT).

Methods: A total of 24 eyes with intermediate and early AMD were included. Two independent, experienced masked retinal graders assessed images for the number and size of drusen. Drusen were further assessed by OCT imaging.

Results: Drusen observed by multicolor imaging were significantly fewer in number than those seen in retromode ($P < 0.001$). Smaller drusen were easily identified on retromode imaging in comparison with multicolor. Retromode findings corresponded to drusen on OCT imaging in all the patients.

Conclusions: The subretinal deposits detected by retromode imaging were consistent with the appearance of drusen on OCT imaging. Retromode imaging detected significantly more deposits than multicolor images. Retromode imaging provides a rapid, noninvasive technique, useful in monitoring subtle changes and progression of AMD, which may be useful in monitoring the response of drusen to future therapeutic interventions.

Abstract No.: 201077
Intraoperative Visualization of Retina Through a Microspherophakic Lens: A Novel Optical Phenomenon

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Purpose: Intraoperative observational case report to document a rare optical phenomenon seen during lens surgery in microspherophakia, allowing direct visualisation of the retina through an intact lens.

Methods: A 17-year-old female with bilateral microspherophakia and high lenticular myopia underwent phacoaspiration. Intraoperatively, before capsulorrhexis and without posterior capsule rupture, the retina and optic disc vessels were distinctly visible through the steeply curved crystalline lens under microscope focus.

Results: The unique optical properties of microspherophakic lens — increased curvature, reduced equatorial diameter, and clear media — enabled this retinal view. The lens acted as a high-powered optical conduit under coaxial illumination.

Conclusions: This rare intraoperative observation highlights the unexpected optical behavior of microspherophakic lenses. Recognising such phenomena may aid in understanding fundal reflexes, assessing lens integrity in lens anomalies.

Abstract No.: 200820
Locked in Sight: A Case of Atypical Optic Neuritis Presenting as Orbital Apex Syndrome (OAS)

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Purpose: This case report describes a 50-year-old male who presented with sudden-onset blurring of vision in the left eye, associated with headache and bilateral ophthalmoplegia.

Methods: Examination revealed decreased visual acuity, dyschromatopsia, and a grade 2 relative afferent pupillary defect (RAPD) in

the left eye, alongside extraocular movement limitations. Fundoscopy showed optic disc edema on the left and myelinated retinal nerve fiber layer in the right eye. Magnetic resonance imaging revealed a contrast-enhancing lesion in the left cavernous region, suggestive of OAS. Initial differentials included atypical optic neuritis, Tolosa-Hunt syndrome, and demyelinating disorders such as neuromyelitis optica spectrum disorder (NMOSD) and myelin oligodendrocyte glycoprotein antibody disease (MOGAD). Work-up ruled out infectious and systemic inflammatory causes.

Results: The patient was started on high-dose intravenous methylprednisolone, followed by tapering oral steroids, leading to significant clinical improvement.

Conclusions: This case emphasizes that demyelinating disease may present with overlapping features of optic neuritis and OAS. Prompt imaging, antibody testing, and early corticosteroid treatment are essential to achieve favorable outcomes. Detailed history and neurologic examination remain crucial for lesion localization and diagnosis.

Abstract No.: 200152
Oral Fluorescein Angiography (OFA) Using Broadline Imaging for Retinal Diseases

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Purpose: Fluorescein angiography (FA) is essential for diagnosing retinal diseases, but its conventional intravenous administration poses challenges, such as patient discomfort, invasive nature, and preparation delays. This study evaluates oral fluorescein angiography (OFA) as a safer, less invasive alternative.

Methods: A total of 445 patients underwent OFA using fluorescein dosed at 25 mg/kg body weight, dissolved in 30 ml of sugar-free juice, followed by another 30 ml of juice without dye. Angiograms were captured at regular intervals, with fluorescence appearing between 1 minute 30 seconds and 26 minutes 25 seconds (mean: 8 minutes 45 seconds).

Results: Results showed high-quality images in 95.3% of patients, with imaging quality, fluorescence intensity, and diagnostic accuracy comparable to intravenous (IV) FA while reducing adverse reactions. OFA provides distinct advantages, including enhanced safety, greater patient comfort, faster preparation, and dynamic angiography. It is particularly beneficial for pediatric patients, individuals contraindicated for IV administration, and cases requiring multiple procedures. OFA offers multiple advantages over optical coherence tomography angiography in terms of being a dynamic procedure showing the true extent of disease.

Conclusions: OFA is reproducible and cost-effective and can be performed by trained technicians, making it accessible for widespread clinical use. Over 99% of patients achieved quality imaging, demonstrating its reliability and sensitivity. Given its safety, feasibility, and effectiveness, OFA should be considered a viable option for evaluating retinal diseases while minimizing risks associated with IVFA.

Abstract No.: 200945
Unmasking Retinal Details: The Role of Multicolour Imaging (MCI) in Inherited Retinal Dystrophies (IRDs)

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Purpose: To assess the utility of MCI as part of multimodal imaging in the evaluation and monitoring of IRDs.

Methods: A cross-sectional observational study at a tertiary eye care hospital. One hundred consecutive patients with clinically diagnosed IRDs underwent detailed ophthalmic evaluation, including visual acuity, slit-lamp examination, fundus evaluation, ultra-widefield fundus photography, optical coherence tomography, fundus autofluorescence (FAF), multicolour imaging (MCI), and pedigree analysis. Electrophysiology was performed in selected cases. Imaging modalities were compared for their ability to detect and delineate disease-specific features.

Results: Of the 100 patients (68 males, 32 females), diagnoses included retinitis pigmentosa (57), Stargardt disease (17), rod–cone dystrophy (13), Best disease (4), achromatopsia (4), and others (5). MCI was particularly useful in visualizing retinal pigment epithelium loss and outer retinal atrophy in Stargardt disease and rod–cone dystrophy. Residual vitelliform material in Best disease and perifoveal hyperreflective rings in retinitis pigmentosa were better appreciated on MCI. FAF remained superior for identifying flecks in Stargardt disease and bull's-eye maculopathy in cone–rod dystrophy.

Conclusions: MCI enhances lesion visualization in selected IRDs and complements other imaging modalities. It shows promise for future use in disease monitoring, particularly in the context of evolving gene and cell therapies.

Abstract No.: 200322
When Curiosity Turns Harmful: A Case Report of Green Laser–Induced Maculopathy in a Young Boy and Public Health Implications

*First Author: Fariah **OSMAN***
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Purpose: To report a rare case of self-inflicted maculopathy caused by direct green laser light exposure in a young male, highlighting clinical features, imaging findings, and management considerations.

Methods: A 16-year-old boy presented with a complaint of a central black spot in the right eye immediately after shining a green laser pointer directly into his eye while playing. Comprehensive ophthalmic evaluation, including visual acuity testing, anterior segment examination, intraocular pressure (IOP) measurement, dilated fundus examination, and optical coherence tomography (OCT) macula imaging, was performed.

Results: Best-corrected visual acuity was 6/6 in both eyes. The anterior segment and IOP were within normal limits bilaterally. Fundus examination of the right eye revealed a dull macular reflex with a pseudo–macular hole appearance. OCT macula imaging demonstrated a disrupted retinal pigment epithelium layer in the right eye, consistent with laser-induced retinal injury. No surgical intervention was required. The patient was managed conservatively with topical Nepafenac 0.3% once daily for one month and advised on strict avoidance of further laser exposure. A follow-up OCT was scheduled after one month to assess structural changes and recovery.

Conclusions: Self-inflicted laser pointer injury can cause significant retinal damage even in the absence of visual acuity loss. Early recognition through imaging is crucial for diagnosis and monitoring. Public awareness about the ocular hazards of handheld lasers is essential to prevent such preventable injuries.

Abstract No.: 200911
Wide-Angle Indocyanine Green (ICG) imaging in Pachychoroid Diseases (PCD)

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Purpose: This study was done to characterize these choroidal vascular changes using widefield ICG angiography (ICGA).

Methods: A prospective, nonrandomized, noncomparative interventional study of 40 eyes (27 patients) with PCD. Pachychoroid phenotype was identified on spectral-domain optical coherence tomography, and disease characterisation was done on multimodal imaging. We had 15 eyes with neovascular PCD and 25 eyes with nonneovascular PCD, including central serous chorioretinopathy (CSCR) (17), pachychoroid pigment epitheliopathy (PPE), pachydrusen, and noncomplicated pachychoroid (2 each). Two independent observers masked with reference to the disease entity analyzed the ICG images. Patients with media haze, massive intraretinal/subretinal hemorrhage were excluded from the study.

Results: Parameters analyzed: 1) Asymmetric vortex-vein distribution; 2) Intervortex anastomoses (IVA); 3) Extension of large caliber vessels into posterior pole; and 4)

Choroidal vascular hyperpermeability (CVH). CVH was invariably present in all eyes with chronic-active CSCR but was present in 6.6% of neovascular PCD. IVA was present in 86.6% of the neovascular PCD and 64.7% of the chronic-active CSCR eyes. Only one-fourth of the uncomplicated PCD and PPE eyes had CVH and IVA, while an asymmetric vortex vein was present in 50% of these eyes. The Cohen-Kappa interobserver agreement was 0.7. The above results show that while vascular remodelling and congestive features are pronounced in chronic active CSCR, they receded in nonexudative PCD. The neovascular PCDs show vascular remodelling changes, but what causes the trigger for new vessel formation is not understood.

Conclusions: The study gives a comprehensive understanding of vascular remodelling and choroidal congestion in PCDs, which can help individualize the treatment protocols.

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Abstract No.: 200506
A Case Report of Choroidal Melanoma in a Filipino Female

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Purpose: Choroidal Melanoma is a primary intraocular malignant tumor with an incidence of 0.2-0.4 per million in Asia. While the average age at diagnosis is in the sixth decade, cases have been observed in all age groups. In rare cases, choroidal melanoma may manifest as subretinal and preretinal hemorrhage, although the clinical presentation varies significantly. Early detection is essential due to its high metastatic potential.

Methods: This case report includes the patient's history, physical examination, and findings from multimodal imaging.

Results: We present a case of a 44-year-old female with a two-day history of sudden, painless blurring of vision in her left eye, accompanied by a throbbing headache. Fundus examination revealed a large pigmented subretinal mass extending to the mid-vitreous with associated preretinal and subretinal hemorrhages and exudates. Multimodal imaging, including B-scan ultrasonography, fluorescein angiography, and magnetic resonance imaging, revealed features highly suggestive of choroidal melanoma. Given the high metastatic potential, enucleation was immediately performed. A gross examination of the enucleated globe shows a dark brown and irregular mass measuring 15.6 × 12.3 × 10 mm arising from the posterolateral choroid.

Conclusions: This case highlights the importance of early recognition of choroidal melanoma given its life-altering effect. Early intervention with enucleation was performed in this case due to high metastatic risk. History, risk factors, and clinical features, including symptoms, tumor size, location, and tumor growth, should always be correlated with histopathologic findings to distinguish benign from malignant lesions. Accurate diagnosis is crucial to ensure tailored management for the patient.

Abstract No.: 201272
Ciliary Body Leiomyoma Diagnosed as Uveal Melanoma: Diagnostic Value of Intraocular Biopsy

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Purpose: To report a case of ciliary body leiomyoma initially diagnosed as uveal melanoma, and to highlight the importance of histopathological and immunohistochemical evaluation in guiding appropriate globe-sparing management.

Methods: A 20-year-old female previously diagnosed with right eye uveal melanoma and advised enucleation sought a second opinion. Comprehensive ocular examination and imaging were conducted. Clinical findings, ultrasound results, and histopathological evaluation, including immunohistochemical

(IHC) staining, were used to confirm the diagnosis.

Results: Clinical examination revealed a solid, brownish tumor of the ciliary body extending from the 3 to 10 o'clock positions. The mass exerted significant pressure, causing iris-corneal touch and secondary angle closure. The lens was cataractous and displaced superonasally. Fundus view was obscured. B-scan ultrasonography showed a 15 × 13 mm solid tumor with low internal reflectivity. An intraocular biopsy was performed to aid in definitive diagnosis. Histopathology revealed a round to spindle cell neoplasm. IHC staining was smooth muscle actin (SMA)–positive, caldesmon-positive, SOX10-negative, and Melan A-negative—findings consistent with ciliary body leiomyoma. To manage secondary ocular hypertension, transscleral diode cyclophotocoagulation was performed, successfully lowering intraocular pressure while preserving the globe.

Conclusions: Ciliary body leiomyomas are rare benign tumors that can mimic uveal melanoma or other intraocular malignancies. Accurate diagnosis through histopathology and confirmatory IHC is essential in guiding globe-sparing procedures and avoiding overtreatment. Despite their benign nature, leiomyomas can cause local complications such as lens subluxation, secondary glaucoma, and retinal detachment. Early recognition and appropriate intervention are key to preserving ocular integrity and function.

Abstract No.: 200823
Combined Hamartoma of the Retina and the Retinal Pigment Epithelium (CHRRPE) in a Pediatric Patient Presenting as an Intraocular Malignancy

*First Author: Fatima **REGALA***
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Purpose: To report a rare case of a CHRRPE in a pediatric patient, which presented as an ocular mass with buphthalmos and a nonseeing eye, features suggestive of intraocular malignancy that necessitated diagnostic enucleation.

Methods: A 5-year-old girl presented with progressive enlargement and opacification of the right eye since infancy. Examination revealed a buphthalmic right eye with total corneal opacification, negative light perception, and elevated intraocular pressure. B-scan ultrasonography demonstrated a dense hyperechoic lesion with high spikes and stiff aftermovement in the mid-vitreous. Computed tomography (CT) revealed an intraocular mass with intralesional calcifications. Diagnostic enucleation was performed, given the high suspicion of retinoblasoma.

Results: Gross pathology revealed a tan-brown mass in the posterior chamber (13.0 mm x 12.0 mm x 8.0 mm). Histopathologic examination showed disorganized, hamartomatous proliferation of all retinal layers, abundant blood vessels, and interweaving cords and tubules of retinal pigment epithelium. The constituent cells exhibited round to elongated nuclei, inconspicuous nucleoli, and abundant eosinophilic cytoplasm — findings consistent with CHRRPE. Calcifications and hemorrhage were noted, likely secondary to chronic retinal detachment. No Flexner-Wintersteiner rosettes or evidence of malignancy were identified.

Conclusions: Although CHRRPE is a benign lesion, it can closely imitate intraocular malignancy in pediatric patients with atypical features. In instances where imaging and clinical findings are inconclusive, timely diagnostic enucleation should be done to exclude malignancy and address ocular morbidity.

Abstract No.: 201380
Malignant Solitary Fibrous Tumor (SFT) of the Orbit in a Young Female: A Case Report

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Purpose: To report a rare case of a benign SFT of the orbit in a G1P1 female, which transformed into a malignant form, highlighting the role of histopathology, immunohistochemistry, and timely surgical intervention in management.

Methods: A G1P1 (1001) 27-year-old female with a previous history of enucleation with incision biopsy of an orbital tumor two years prior — with histopathologic findings of a benign SFT — presented with a progressively enlarging, painful right orbital mass with associated proptosis and recurrent bleeding. Imaging revealed a heterogeneously enhancing orbital mass with sinus and cranial fossa extension. Histopathologic and immunohistochemical analyses showed findings indicative of a malignant SFT. The patient underwent lid-sparing exenteration with partial maxillectomy and intraoperative frozen section evaluation under general anesthesia with prompt postoperative care.

Results: Grossly, the mass measured 8 x 7 x 6 cm and was friable, erythematous, and necrotic. Histology showed ovoid to spindle cells in a fibrocollagenous stroma with staghorn vessels, marked pleomorphism, and 28 mitoses per 10 high-power fields (HPF). STAT6 and CD34 positivity confirmed the diagnosis. Risk stratification using the model developed by Demicco et al. placed the tumor at intermediate metastatic risk. The patient showed favorable postoperative recovery following targeted antibiotic treatment and wound care.

Conclusions: Orbital SFTs, though rare, should be considered in the differential diagnosis of progressive orbital masses. Malignant transformation necessitates prompt and aggressive surgical intervention. Histopathology and immunohistochemistry, particularly STAT6 staining, are critical for diagnosis. Close postoperative monitoring is essential to manage complications and reduce recurrence risk.

Abstract No.: 200628
Overcoming Barriers in the Management of Advanced Retinoblastoma With Intracranial Extension: A Case Report

*First Author: Justine **TORREGOSA***
*Co-Author(s): Justin Craig **CANARES***

Purpose: To present a case of advanced retinoblastoma with intracranial extension and outline treatment challenges in a resource-limited setting.

Methods: We report a case of a three-year-old male with a buphthalmic right eye and an unremarkable left eye. Imaging revealed an intraocular mass measuring 2.7 × 3.2 × 3.1 cm, with extrascleral extension and chiasmal involvement — consistent with International Retinoblastoma Staging System (IRSS) stage IVB.

Results: Instead of undergoing palliative treatment, the patient underwent the high-dose chemotherapy intended for a stage III Rb. Five cycles of systemic chemotherapy using alternating vincristine 1.5 mg/m², etoposide 150 mg/m², carboplatin 560 mg/m², and vincristine 1.5 mg/m², doxorubicin 30 mg/m², cyclophosphamide 1200 mg/m², have been given. Magnetic resonance imaging showed tumor reduction to 1.2 × 1.8 × 0.8 cm. Enucleation is planned.

Conclusions: This case highlights the critical importance of early detection and prompt intervention in retinoblastoma management. Even in advanced-stage disease, such as in this case, intensive, high-dose systemic chemotherapy can achieve substantial tumor regression. These findings underscore both the urgency of strengthening early diagnosis and the potential value of aggressive treatment protocols in select cases of advanced retinoblastoma.

Abstract No.: 201278
Rare Case Presentation of Conjunctival Kaposi Sarcoma (KS) as the Initial Manifestation of Acquired Immunodeficiency Syndrome (AIDS)

*First Author: Karthiban **THANALINGAM***

Purpose: Kaposi sarcoma is the most common neoplasm associated with AIDS. However, KS conjunctival involvement is rare and may present as the initial manifestation of undiagnosed AIDS.

Methods: A case report.

Results: A 31-year-old Malay male with underlying retinal vascular disease (RVD) presented with left eye lower lid swelling for one month associated with itchiness and redness. Examination revealed visual acuity of 6/9 in the right eye and 6/9 in the left. There was no relative afferent papillary defect. The left eye lower palpebral was swollen with diffuse redness mass with subconjunctival hemorrhage involving 360 degrees of conjunctiva. The cornea was clear. The fellow eye is unremarkable. Fundus examination of both eyes was normal, and no sign of cytomegalovirus retinitis. The patient was initially treated as a left eye pyogenic granuloma; however, the lesion progressed despite treatment. The left eye lower lid biopsy was done, and the result was conclusive of KS. He was referred to oncology and was started on paclitaxel for a total of six cycles. Upon completing the third cycle of chemotherapy, the left eye lower lid lesion is reducing.

Conclusions: Although rare, ocular KS can be the initial presentation in AIDS. This case highlights the significance of considering KS in atypical conjunctival lesions in high-risk patients. Early biopsy and prompt initiation of systemic chemotherapy can lead to significant local and systemic improvement.

Abstract No.: 201211
Recurrent Right Lower Eyelid Mass in a Two-Year-Old Male: A Rare Case of Embryonal Rhabdomyosarcoma

*First Author: Nonettee **PASCO-ROSETE***
*Co-Author(s): Miguel Eduardo **JARABELO***

Purpose: To present a rare case of embryonal rhabdomyosarcoma in a two-year-old male, and to emphasize the importance of early histopathologic confirmation in persistent eyelid masses.

Methods: A two-year-old male presented with a recurrent, progressively enlarging right lower eyelid mass. Initially noted as a painless, monggo-sized lesion, the patient received multiple courses of oral and topical antibiotics for presumed hordeolum. Initial excision with no biopsy was done by a local ophthalmologist. However, recurrence and rapid growth prompted a consultation in our institution. Incision biopsy and debulking procedure were done via anterior orbitotomy. Intraoperative findings and tissue characteristics were documented, and the tissue specimen was submitted for histopathologic analysis.

Results: Surgical exploration revealed a tan-brown, doughy orbital mass measuring 2.5 × 2.0 × 1.4 cm, weighing 4 grams, with a 0.6 cm cystic component. Intraoperatively, it was noted that the lesion had obliterated the inferior fornix and tarsus of the lower eyelid. Histopathology revealed embryonal rhabdomyosarcoma, a rare diagnosis in this age group. Complete resection was not achieved, but anterior debulking was performed. Further oncologic management was then planned.

Conclusions: This case underscores the diagnostic challenge of persistent eyelid masses in pediatric patients. Misdiagnosis and delayed biopsy can postpone appropriate oncologic management. Although embryonal rhabdomyosarcoma is uncommon in very young children, it should remain in the differential diagnosis for recurrent or atypical lid lesions. Immunohistochemical staining is important in identifying accurate tissue diagnosis. Early diagnosis is essential to avoid delays in definitive treatment.

Abstract No.: 200980
Secondary Intraocular Lymphoma (SIOL) From a Diffuse Large B-Cell Lymphoma (DLBCL): A Case Report

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*Co-Author(s): Kristine **CORPUS-VELASQUEZ**, Reny Rose **SABADO***

Purpose: To report a case of SIOL from a DLBCL and highlight the importance of clinical suspicion, multimodal ophthalmologic imaging, and diagnostic vitrectomy in its diagnosis and management.

Methods: A 61-year-old woman with a prior diagnosis of DLBCL, confirmed by biopsy of an enlarged submandibular lymph node

and treated with systemic chemotherapy, presented four months later with progressive, painless blurring of vision in the right eye, with visual acuity reduced to hand motion. SIOL was suspected, prompting multimodal ophthalmologic imaging and diagnostic vitrectomy.

Results: Fundus examination revealed multiple subretinal yellowish elevated lesions. Fluorescein angiography demonstrated granular hyperfluorescence, while macular optical coherence tomography (OCT) revealed retinal pigment epithelium (RPE) elevations with internal hyperreflectivity. Cytological analysis of the vitreous sample identified atypical mononuclear cells suggestive of malignancy. However, flow cytometry did not establish clonality, and immunohistochemistry was inconclusive due to insufficient volume. Clinical and cytological findings supported a diagnosis of SIOL. The patient was referred back to oncology for reinitiation of systemic chemotherapy. Following treatment, her visual acuity improved to counting fingers, with a marked decrease in RPE elevations on OCT.

Conclusions: SIOL is an uncommon but vision-threatening manifestation of systemic lymphoma. Due to its nonspecific presentation, a high index of suspicion is critical. Although diagnostic confirmation may be hindered by inadequate vitreous sampling, vitrectomy remains an essential tool. Future advancements, including MYD88 mutation testing, may enhance diagnostic yield. Early recognition and prompt intervention are keys to optimizing visual and systemic outcomes in this challenging condition.

Abstract No.: 200859
The Diagnostic Challenge: Identifying Orbital Neuroblastoma in a Pediatric patient

First Author: Yvette Marie ***SANTIAGO-GATMAITAN***
Co-Author(s): Phillip Jairus ***SAYO***

Purpose: To present a case of metastatic neuroblastoma in a child following an alleged head trauma, emphasizing the diagnostic challenge and importance of early diagnosis.

Methods: A case report.

Results: A one-year-old previously healthy Filipino girl presented with left periorbital hematoma, following presumed head trauma after an unwitnessed fall. Over weeks, there was persistence of hematoma with new-onset proptosis and changes in sensorium initially assessed as left spheno-orbital fracture with epidural hematoma. Further worsening of status prompted admission and referral to ophthalmology. Examination showed bilateral periorbital ecchymosis, nonmovable mass at the left temporal area, proptosis of left eye with restricted ocular motility, mandibular lymphadenopathy, and an abdominal distention. Orbitocranial magnetic resonance imaging revealed a vividly enhancing extra-axial mass with destruction of the left lateral wall and intracranial extensions, as well as a smaller extraconal mass in the right orbit. Abdominal computed tomography scan showed a large left suprarenal mass. Emergency orbital biopsy done showed round cell tumor. Despite the absence of immunohistochemical staining, clinical and radiologic findings were suggestive of an advanced metastatic orbital neuroblastoma. Her condition further deteriorated with systemic complications. This case features the diagnostic challenge of differentiating trauma-related injuries from underlying malignancies in children.

Conclusions: This case highlights the importance of suspecting underlying malignancies in children with orbital or cranial masses, especially when recovery deviates from typical trauma. Early diagnosis, thorough evaluation, and a multidisciplinary approach are crucial for effective management and improved prognosis in complex pediatric cases.

Abstract No.: 200393
To Describe the Clinical Profile and Management of Patients With Iris Metastasis

First Author: Vishal ***RAVAL***
Co-Author(s): Vidhi ***BAJPAI***

Purpose: To describe the clinical profile and management of patients with iris metastasis.

Methods: A retrospective case series of patients with clinically or histopathologically confirmed iris metastasis from systemic malignancy managed at a tertiary eye care center between 2019 and 2023. Data collected included demography, presenting symptoms, clinical features (slit-lamp and gonioscopy), ultrasound biomicroscopy (UBM) findings, primary cancer type, and treatment outcomes, if any.

Results: Six subjects (mean age 54 years) were included. Presenting symptoms were blurred vision (3), pain (2), and eye discoloration (1). All had unilateral amelanotic, vascularized iris masses; five arose from the iris root, one near the pupillary margin. Iris neovascularization was seen in three eyes; one had secondary glaucoma. UBM showed homogenous (2) or heterogeneous (2) echogenic stromal masses. Three had prior cancer; in others, iris metastasis led to diagnosis of lung (3), breast (2), or renal (1) primary. Treatments included plaque brachytherapy (1), excision (1), and intracameral bevacizumab (1), all showing regression. At four and a half months mean followup, one had died, two were in remission, and three were lost to follow-up.

Conclusions: Although rare, iris metastasis can be the first indication of a primary cancer, especially when the initial primary cancer site is unknown. In most cases, clinical examination along with UBM imaging can aid diagnosis, whereas indication for tissue biopsy is limited.

Abstract No.: 200421
Yasunari Nodules in a Pediatric Filipino Patient wWith Neurofibromatosis Type 1 (NF1)

*First Author: Ricardo **PAPA***
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Purpose: This case report aimed to highlight the significance of Yasunari nodules in the early diagnosis of NF1 and to present the first documented case of an NF1 patient in the Philippines who presented with multiple bilateral Yasunari nodules identified using near-infrared reflectance (NIR) imaging.

Methods: A 14-year-old male patient with a history of hyperpigmented lesions and no visual symptoms was referred by the pediatrics service for an ophthalmologic examination due to a presumptive diagnosis of NF. Slit-lamp examination, indirect ophthalmoscopy, scanning laser ophthalmoscopy (SLO) , and NIR imaging were performed to assess ocular manifestation of NF1.

Results: The patient exhibited multiple Lisch nodules on slit-lamp examination and with an unremarkable posterior pole on indirect ophthalmoscopy. SLO images revealed multiple orange-hued lesions, while NIR imaging identified multiple scattered hyperreflective lesions in both eyes, consistent with Yasunari nodules. These findings, together with the clinical presentation, confirmed the clinical diagnosis of NF1.

Conclusions: This case underscores the importance of integrating modern imaging techniques, such as NIR, in conjunction with clinical examination to diagnose NF1. Yasunari nodules, being highly sensitive and specific markers, aid in early diagnosis which leads to early management and possibly an improvement in quality of life. Thus, the integration of NIR as a means of detecting Yasunari nodules can improve diagnostic accuracy and enhance the quality of life for NF1 patients through timely diagnosis and appropriate management.

Abstract No.: 200707
m6A Epigenetic Regulation of Galectin-1 by METTL3 Facilitates Metastatic Progression and Cancer Stemness in Uveal Melanoma (UM)

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Purpose: UM is a highly aggressive ocular malignancy with limited treatment options for metastatic disease. Emerging evidence suggests that epitranscriptomic modifications play crucial roles in tumor progression.

Methods: We demonstrate that METTL3, an m6A ribonucleic acid (RNA) methyltransferase, promotes UM metastasis and cancer stemness by epigenetically regulating Galectin-1 expression. We established highly invasive UM cell lines and confirmed that Galectin-1 is upregulated in metastatic cells and strongly correlates with enhanced cell motility and cancer stemness.

Results: Functional assays revealed that METTL3 knockdown suppresses Galectin-1 expression, impairs migration and invasion, and reduces cancer stemness, whereas Galectin-1 overexpression rescues these phenotypes. Importantly, clinical dataset analyses revealed a positive correlation between METTL3 and Galectin-1 expression in UM patient samples, both of which are associated with reduced metastasis-free and overall survival.

Conclusions: Together, our findings identify a novel METTL3–Galectin-1 regulatory axis that facilitates metastatic progression and cancer stemness in UM, suggesting both as potential prognostic biomarkers and therapeutic targets.

Pediatric Retina

Abstract No.: 201333
A Rare Case of Spontaneous Malignant Glaucoma in a Young Male With Suspected Regressed Retinopathy of Prematurity (ROP) or Retinal Dystrophy

*First Author: Anton Kyle **ORFANEL***

Purpose: To share an unusual case involving malignant glaucoma that developed spontaneously in a young adult with no prior ocular surgery, but with background findings suggesting early-onset retinal disease.

Methods: A 21-year-old male, reportedly born prematurely at six months of age of gestation (AOG), came to our institution with complaints of severe right eye pain and vision loss. He had no surgical history, but relatives had noted longstanding poor vision, nystagmus, and progressive changes since childhood. Initial examination revealed markedly shallow anterior chambers, high intraocular pressures, and optic nerve pallor. Medical therapy was initiated, but due to minimal response, the patient eventually underwent pars plana vitrectomy and lensectomy in the affected eye.

Results: Despite full medical management, intraocular pressure remained elevated and the anterior chamber stayed shallow. Fundus evaluation showed pigmentary changes and vessel attenuation suggestive of an underlying retinal dystrophy, possibly related to regressed ROP. The left eye had no light perception. Following surgery, the patient reported resolution of pain, and intraocular pressure stabilized below 12 mmHg in the right eye. Fluorescein angiography is planned once the cornea clears to further assess the retinal status.

Conclusions: What makes this case distinct is the development of malignant glaucoma in a non-operated, young adult eye — a rare presentation. The presence of retinal findings consistent with regressed ROP or a dystrophic process raises questions about possible predisposing factors. This case emphasizes the importance of recognizing atypical presentations and acting promptly when conventional causes are absent.

Abstract No.: 200609
A Rare Case of Straatsma Syndrome in the Philippines: Clinical Presentation and Response to Therapy

*First Author: Millette **ROMUALDEZ***
*Co-Author(s): Alyssa Marie **HIZON**, Marie Joan **LOY***

Purpose: Currently, there are no published epidemiological studies documenting the prevalence or clinical characteristics of Straatsma syndrome in the Philippines. This case contributes to the limited local data and highlights the importance of recognizing this rare entity in the clinical practice.

Methods: Straatsma syndrome is a rare condition characterized by the classic triad of unilateral myelinated retinal nerve fibers, axial myopia, and amblyopia. It may also present with additional ocular findings such as

strabismus, nystagmus, and hypoplastic optic nerve, among others. We report the case of a 13-year-old Filipino male who presented solely with the traditional triad of Straatsma syndrome, and his treatment response was evaluated in relation to known prognostic indicators.

Results: Despite the timely initiation of refractive correction and amblyopia therapy, only minimal visual improvement was observed.

Conclusions: Although the visual prognosis in such cases remains guarded, this case reinforces the value of early identification and the need to pursue visual rehabilitation, even in presentations with limited response to conventional therapy.

Abstract No.: 200811
A case of Axenfeld-Rieger Syndrome (ARS) with Bitot Spot and Normal Vitamin A Levels

*First Author: Patricia **CABRERA***
*Co-Author(s): Mary Claudette **ARCELLANA***

Purpose: Axenfeld-Rieger Syndrome (ARS) is an autosomal dominant form of anterior segment dysgenesis that is associated with systemic abnormalities. Its ocular clinical features include corectopia, polycoria, ectropion uveae, posterior embryotoxon, and increased intraocular pressure. Systemic abnormalities may include dental issues, facial bone changes such as maxillary hypoplasia, umbilical abnormalities, hypospadias, and pituitary abnormalities.

Methods: In this case report, we present a 14-year-old Filipino male with findings of ARS (posterior embryotoxon, corectopia, iris strands, corneal opacity, telecanthus, and developmental delay) and Bitot spot in both eyes.

Results: His vitamin A levels were normal. His mother was also coincidentally found to have posterior embryotoxon and Bitot spot in both eyes. Future plans include examination of family members, determination of their Vitamin A levels, and genetic testing.

Conclusions: Previous studies have reported the association of Bitot spot with anterior segment dysgenesis in the setting of normal vitamin A levels. The presence of Bitot spot in these cases could be explained by genetic mutations in PAX6 or other transcription factors that have roles in the metabolism of the conjunctiva or by damage from the use of eye drops with preservatives. Our case may support the genetic basis of the association because of similar findings in a family member.

Abstract No.: 200589
Beyond Retinopathy of Prematurity (ROP): Proliferative Retinopathy in Incontinentia Pigmenti (IP) – A Case Report and Diagnostic Challenges

*First Author: Sreeramyaa **PALANISAMY***
*Co-Author(s): Hema **DURAISWAMY***

Purpose: To report a case of proliferative retinopathy in an infant with IP, mimicking ROP, and to emphasize the importance of considering systemic differentials in neonatal retinal vascular disorders and expanding fundus screening protocols beyond conventional ROP screening.

Methods: A 37-week full-term, 2.8-kg Asian-Indian female infant was incidentally screened for ROP at two weeks of age due to the presence of linear vesiculo-bullous skin lesions along the lines of Blaschko. Dermatologic findings were consistent with IP. Ocular examination revealed a normal anterior segment. Indirect ophthalmoscopy showed incomplete vascularization and half-zone vessel loops in Zone 1 in right eye, and flat neovascularization and subretinal hemorrhage at macula in the left eye, consistent with stage 3 IP-associated retinopathy.

Results: Whole exome sequencing (WES) was performed using the KAPA HyperExome V2 kit and sequenced on NovaSeq 6000 platform. Sequencing reads were mapped to the human reference genome GRCh37/HG19. No pathogenic variants in the IKBKG gene were identified. The infant was immediately treated with intravitreal bevacizumab (IVB; 0.5 mg/0.02 cc), followed by prophylactic peripheral laser photocoagulation (LPC) after

one month. Follow-up examinations showed complete regression of neovascularization and stabilization of retinal findings.

Conclusions: This case highlights the importance of considering systemic differentials in neonatal retinal vascular disease and supports expanding fundus screening protocols beyond traditional ROP criteria. It also emphasizes the need for a multidisciplinary approach to early diagnosis and intervention, and the challenges in genetic testing when dealing with rare diseases in resource-limited settings.

Abstract No.: 201156
Case Report: Navigating Eye Complications of a Three-Month-Old Female Infant Diagnosed With Incontinentia Pigmenti (IP)

*First Author: Jubaida **MANGONDATO AQUINO***
*Co-Author(s): Minnette **PANGANIBAN**, Alvin Anthony **SERRANO***

Purpose: We describe a three-month-old Filipino baby girl who was diagnosed as having IP and was managed for proliferative retinopathy of her left eye.

Methods: Examination under anesthesia (EUA), fluorescein angiography (FA), and laser indirect ophthalmoscopy (LIO) were done. EUA findings, fundus photos, and videos of FA were recorded accordingly.

Results: The patient presented with multiple swirling patterns of hyperpigmented blistering plaques on all her extremities. Fundus photo of the right eye showed clear media with a yellow-orange optic disc with distinct disc borders and a cup-to-disc ratio of 0.3. There were no noted retinal hemorrhages, exudates, or avascularized zones. Fundus photos of the left eye showed clear media with a yellow-orange optic disc with distinct disc borders and a cup-to-disc ratio of 0.3. There were no noted retinal hemorrhages or exudates. There were avascular areas seen in the peripheral temporal and nasal retina. FA of the left eye showed absence of foveal hypoplasia, which is commonly seen in IP; foveal avascular zone was intact. FA arteriovenous phase of the left eye showed patches of capillary nonperfusion on the peripheral retina with notable tortuosity of the peripheral vessel ends. LIO was done on the left eye at the avascularized zones, follow-up was done at one week, one month and six months thereafter.

Conclusions: Management of IP requires a multidisciplinary approach. All patients with IP should be monitored from infancy to adulthood for the possible development of retinal complications and to avoid its crippling ophthalmic manifestations.

Abstract No.: 200268
Comparison of Incidence and Characteristics of Retinopathy of Prematurity (ROP) In Urban and Semi-Urban Parts of Uttar Pradesh

*First Author: Shobhit **CHAWLA***
*Co-Author(s): Komal **AGARWAL**, Priyanka **RAJ***

Purpose: To compare the screening patterns, incidence, characteristics, and outcomes of ROP in Tier 2 and Tier 3 cities of East Uttar Pradesh, India.

Methods: A retrospective cross-sectional study was conducted in a single hospital each in a Tier 2 (urban) and a Tier 3 (semi-urban) city in East Uttar Pradesh, India. Babies were screened according to the Indian National Guidelines for ROP screening (RBSK). They were divided into two groups: Group A—urban and Group B—semi-urban. We evaluated the data for incidence, demographic patterns of the screened babies, ROP patterns, treatment, and outcomes.

Results: A total of 748 eyes in Group A and 398 eyes in Group B were included in the study. The mean gestational age (GA) and birth weight (BW) in Group B (32.89 weeks; 1891.14 grams) were significantly higher than in Group A (31.94 weeks; 1600.59 grams) ($P < 0.001$). The postmenstrual age (PMA) at the first screen and at ROP detection was higher in Group A ($P < 0.0001$). The incidence of ROP was comparable in both groups (37.7% vs. 34.6%; $P = 0.31$). Stages 4 and 5 were significantly higher in Group A ($P = 0.04$ and 0.001). The incidence

of aggressive ROP (AROP) was comparable in both groups. Group A had a significantly higher number of babies treated with laser alone, while Group B had a significantly higher number treated with anti–vascular endothelial growth factor therapy (anti-VEGF) alone.

Conclusions: The Tier 2 city showed lower GA and lower BW in babies presenting with ROP. Late screening and the number of advanced ROP cases were higher in Tier 2 cities, probably due to referrals. The use of anti-VEGF injections alone was higher in Tier 3 cities, likely due to the ease of the procedure.

Abstract No.: 201287
Cytomegalovirus Retinitis (CMVR) Infection in a Child With Acute Lymphoblastic Leukemia (ALL) on Maintenance Chemotherapy

*First Author: Adeline **LOW SHAN LYN***

Purpose: To report a case of bilateral CMVR in a child undergoing maintenance chemotherapy.

Methods: A case report.

Results: A 6-year-old boy with precursor B-cell ALL and CNS-3 high-risk status was treated according to the standard BFM 2009 protocol for pediatric ALL. At week 15 of maintenance chemotherapy, his mother noticed he had difficulty recognizing near objects with left exotropia. A left relative afferent papillary defect (RAPD) was present. The best-corrected visual acuity (BCVA) was 6/60 in the right eye and no light perception (NLP) in the left eye. Bilateral fundus examination revealed multiple large yellow-white chorioretinal lesions and intraretinal hemorrhages without vitritis. The optic disc in the left eye appeared pale. Intraocular pressures were normal. Serum polymerase chain reaction for cytomegalovirus (CMV) showed a high viral load of 55,630 copies/mL. The patient received an induction dose of intravenous ganciclovir 5 mg/kg every 12 hours, along with biweekly intravitreal ganciclovir 2 mg/0.1mL in both eyes for three weeks. This was followed by oral maintenance ganciclovir and weekly intravitreal ganciclovir injections. He subsequently developed preretinal hemorrhage in the right eye due to occlusive vasculitis, requiring pan-retinal photocoagulation. Eventually, the patient's right eye BCVA improved to 6/45, with a corresponding decrease in CMV viral load. The left eye remained NLP.

Conclusions: Pediatric patients undergoing maintenance chemotherapy for ALL should be screened for CMV, as they may not report visual symptoms, leading to delayed presentation. Early diagnosis and prompt treatment are crucial for preserving vision.

Abstract No.: 200134
Declining Incidence of Retinopathy of Prematurity (ROP): A Retrospective Review at a Tertiary Care Center in 2022-2024

*First Author: Tariq Reza **ALI***
*Co-Author(s): Mohammad **ALAUDDIN**, Nuzhat **CHOUDHURY***

Purpose: Advances in neonatal care have significantly improved the survival rates of preterm babies. They have also influenced the patterns and burden of ROP. Monitoring ROP incidence is crucial to assessing the impact of enhanced neonatal practices. This review aims to find out whether the incidence of ROP is decreasing in our country.

Methods: A retrospective record review was conducted for all infants who underwent ROP screening at our center between 2022 and 2024. Collected data included gender, gestational age at delivery, ROP diagnosis, type and severity of ROP, zone and stage of the disease, and annual trends in ROP incidence. Descriptive statistics were used for analysis.

Results: Out of 2352 eyes (1176 babies), 54.4% were male, and ROP was diagnosed in 627 eyes (26.7%). Aggressive ROP was found in 46.1% of the eyes, and stage 3 was observed in zone II and zone III in 30.7% of the eyes. Stages 4 and 5 comprised 21.4% of the eyes. Notably, with each subsequent year, the number of babies eligible for ROP screening increased (712 in 2022, 722 in 2023, and 918 in 2024). Despite this rise, the incidence of ROP showed a declining trend: 31.5% in 2022, decreasing to 26.6% in 2023, and further to 23% in 2024,

suggesting improvements in neonatal care and preventive practices over time.

Conclusions: The steady decline in ROP incidence over the past three years suggests that ongoing improvements in neonatal care practices are positively impacting the disease rates. Strengthening early screening, timely intervention, and quality neonatal care remains essential to sustain this progress and prevent visual impairment in preterm infants.

Abstract No.: 201127
Descriptive Epidemiologic Study of Retinopathy of Prematurity (ROP) in a Davao Tertiary Center from 2024 to 2025

First Author: Redentor Caesar ***GONZALES***
Co-Author(s): Esther Carmen Arvella ***ERENO****, Adriel Vincent* ***TE***

Purpose: ROP is still one of the leading causes of childhood blindness. Although local data are available, most of these studies were conducted in the NCR. In Mindanao, there is a scarcity of published data studying epidemiology, risk factors, and compliance to follow-up. Hence, the study aims to provide a glimpse of the epidemiologic profile of these patients.

Methods: A retrospective chart review with total enumeration.

Results: There were 263 babies screened, with 39 babies (15%) with ROP. The most common infant risk factors were respiratory distress syndrome (91%), sepsis (84%), and pneumonia (59%). The majority (89%) were concurrently exposed to oxygen (O2) therapy (89%). The mean ballard score for the babies is 30.9 ± 2.01 weeks, with mean postnatal age (PNA) of 6.92 ± 3.10 weeks and screening delay of 9.59 ± 8.63 days. The mean weight is 1.26 ± 0.25 kg. Most had stage 1 or stage 2 ROP, with 12% in stage 3 and 10% with aggressive ROP. There were 13 cases requiring treatment (28%), with intravitreal Injection with anti–vascular endothelial growth factor being the most common treatment modality (62%), followed by laser indirect ophthalmoscopy (LIO) (38%). The majority of those screened were lost to follow-up (59%). Despite that, all babies who underwent treatment for ROP complied for monitoring and follow-up.

Conclusions: The study shows a glimpse of the current ROP status in a Davao center, with prevalence similar to published data. The high rate of noncompliance could be due to lack of coverage in the local level, which would make way for development of health programs specifically for ROP. Further studies are recommended to explore relationships between risk factors.

Abstract No.: 200346
Early Surgical and Visual Rehabilitation in Infantile Bilateral Familial Exudative Vitreoretinopathy (FEVR): A Multidisciplinary Case Approach

First Author: Manoharan ***SHUNMUGAM***
Co-Author(s): Ganeshwary ***RAJAMANICKAM****, Yi Hen* ***WONG***

Purpose: To demonstrate the value of early multidisciplinary intervention — combining advanced surgical techniques with postoperative visual rehabilitation — in managing bilateral FEVR in infancy.

Methods: A five-month-old infant with bilateral FEVR underwent staged evaluation and treatment. Clinical documentation included A-scan biometry, binocular indirect ophthalmoscopy (BIO), B-scan ultrasonography, fluorescein angiography (FFA), and retinoscopy. A coordinated treatment plan was developed across surgical and rehabilitative teams.

Results: The infant presented with poor fixation and squint. B-scan and BIO confirmed bilateral tractional retinal detachment with retrolenticular fibrosis, worse in the left eye (LE). FFA revealed persistent avascular retina and leakage in the right eye (RE), but extensive fibrosis and no leakage in the LE. Bilateral vitrectomy with laser retinopexy was performed. The LE also required a lensectomy and Yamane scleral-fixation of IOL. At 12 months postoperative, the child was prescribed monthly soft contact lenses and enrolled in patching and visual stimulation therapy. Structural stabilization and improved fixation were noted during follow-up.

Conclusions: This case illustrates the importance of early anatomical intervention and structured visual rehabilitation in infantile FEVR. Coordinated surgical and optical rehabilitation efforts are essential to preserve vision in aggressive paediatric retinal disorders.

Abstract No.: 201128
Epidemiology and Clinical Profile of Retinopathy of Prematurity (ROP) in a Tertiary Hospital in Metro Manila

*First Author: Jose Melvin **JIMENEZ***
*Co-Author(s): Tamilyn Chelsea **LADDARAN**, Kristine **VELASQUEZ***

Purpose: To describe the epidemiologic and clinical presentation of premature infants with ROP at a tertiary hospital in Metro Manila from June 2024 to May 2025.

Methods: This is a chart review of premature infants referred for ROP screening at a tertiary hospital in Metro Manila from June 2024 to May 2025.

Results: A total of 126 infants were referred for ROP screening, 10 of which were referred from other hospitals. Out of 116 babies admitted to the hospital, only 15 (12.9%) developed ROP. Their average birth weight was 1214 grams (range 500-1801). Thirteen of them were treated for sepsis, given oxygen supplementation, and packed red blood cell (pRBC) transfusions. All babies had stage 1 or 2 ROP initially, with only three babies progressing to stage 3 and requiring anti–vascular endothelial growth factor (anti-VEGF) injections, while the rest regressed spontaneously. Out of 10 babies referred from other institutions, seven developed ROP stage 2 or 3, one developed aggressive posterior ROP, and one developed ROP stage 4A. Their average birth weight was 1200 grams (range 880-1700). All were treated for sepsis and required oxygen supplementation, and seven required pRBC transfusions. Six were treated with laser, one with anti-VEGF, and two with both laser and anti-VEGF. All regressed except for one who was lost to follow-up and one that expired.

Conclusions: Laser and anti-VEGF injections are proven to be effective in treating ROP if given at the appropriate time, hence the importance of proper screening.

Abstract No.: 200232
Epidemiology of Strabismus in Children in the Western Region of Azerbaijan

*First Author: Yazgul **ABDIYEVA***
*Co-Author(s): Nizami **BAGIROV***

Purpose: To learn the rapid spread of strabismus among children in the western region of Azerbaijan and its epidemiological features.

Methods: More than 900 children living in the western region participated in the study to examine the structure and prevalence of squint in children. All participants underwent standard ophthalmological examinations.

Results: The prevalence of strabismus among children aged under 5, 5-9, and 10-14 years was found to be 3.9 ± 0.6%, 4.3 ± 0.7%, and 3.2 ± 0.6%, respectively, with no statistically significant difference ($P > 0.05$). Similar prevalence rates were observed across different residential environments, including large cities, small towns, and rural areas. Visual acuity among examined children was noted as less than 6/18 (0.3). The proportion of children with visual acuity below 0.05, between 0.05-0.1, and 0.1-0.3 was 0.04 ± 0.1% (under 5 years), 3.2 ± 0.4% (5-9 years), and 6.8 ± 0.7% (9-14 years), respectively. The prevalence of strabismus in children aged 1-15 years varied significantly by place of residence, being higher in urban areas (4.6 ± 0.7%), compared to rural areas (2.7 ± 0.5%), with statistical significance ($P < 0.05$). There was no significant difference in prevalence between boys and girls in all age groups and residential settings. These findings suggest that age and gender do not influence strabismus prevalence, but the urban-rural living environment has an impact.

Conclusions: The level of strabismus spread differs across three age groups. Age and gender have not contributed to the spread of squint among the children, but the spread of

the pathology in urban areas is less than that in big cities.

Abstract No.: 200881
Evaluating the Efficacy of Anti-Vascular Endothelial Growth Factor (Anti-VEGF) Versus Laser Therapy in Zone 1 And Zone 2 Retinopathy of Prematurity (ROP): A Systematic Review and Meta-Analysis

*First Author: Rivaldo **HERIYANTO***
*Co-Author(s): Fatrin **SALIM***

Purpose: ROP is a significant cause of visual impairment in premature infants. Zone 1 ROP poses a higher risk for severe outcomes, while Zone 2 is critical for visual development. We aim to compare the efficacy of anti-VEGF therapy versus laser photocoagulation (LPC) in treating these zones.

Methods: A comprehensive search was done on electronic databases, including PubMed, ScienceDirect, CENTRAL, and Scopus, up to December 6, 2024. Outcomes assessed are initial regression, recurrence, and unfavorable outcomes. All eligible studies were assessed using the Cochrane ROB 2.0 and ROBINS-I. A meta-analysis on interventional studies using Review Manager (RevMan) Version 5.4 was conducted.

Results: Eight studies (1887 patients, 3662 eyes) met the inclusion criteria. Anti-VEGF therapy significantly improved initial regression for zone 1 ROP (odds ratio [OR]: 2.95; 95% confidence interval [CI]: 1.55, 5.61; P = 0.001). For zone 2 ROP, there are no significant differences. (OR: 1.15; 95% CI: 0.59, 2.24, P = 0.67). Zone 1 ROP treated with LPC demonstrates higher odds of recurrence after initial treatment (OR: 2.23; 95% CI: 1.25, 4.00; P = 0.007), compared to lower odds of recurrence in those treated with anti-VEGF in zone 2 ROP (OR: 0.73; 95% CI: 0.56, 0.94; P = 0.010).

Conclusions: Anti-VEGF therapy demonstrates superior initial regression and lower recurrence rates in zone 1 ROP compared to laser therapy. While zone 2 outcomes are comparable, recurrence trends favor anti-VEGF. These findings support zone-specific therapeutic strategies and highlight the evolving role of pharmacologic intervention in ROP management.

Abstract No.: 200482
Genotype-Phenotype of CRB1-Associated Early-Onset Retinal Dystrophy (CRB1-eoRD)

*First Author: Songshan **LI***

Purpose: The purpose of this study was to investigate the genotypic and phenotypic characteristics of CRB1-eoRD and retinal architecture by swept-source optical coherence tomography (SSOCT).

Methods: Eleven probands with CRB1-eoRD were recruited. Clinical information, genetic analysis, and comprehensive ophthalmic examinations, including SSOCT and SSOCT angiography (SSOCTA), were conducted.

Results: A total of 81.8% (9/11) of CRB1-eoRD presented as Leber congenital amaurosis (LCA). Common clinical manifestations included coin-like yellow-white retinal spots and para-arteriolar retinal pigment epithelial retention. Nineteen different CRB1 variants were detected in our case series, including 12 missense, 3 frameshifts, 3 nonsense, and 1 splicing. Of them, 7 variants were novel. SSOCT showed thinner central macula (the LCA group, P < 0.0001), thicker total retina (P < 0.0001), thinner outer retina (P < 0.05), and thicker inner retina (P < 0.0001) compared with the healthy control. The inner/outer (I/O) retina thickness ratio of CRB1-eoRD was 3.0, higher than the healthy control of 1.2 and other inherited retinal diseases of 2.2 (P < 0.0001 and P = 0.0027, respectively). SSOCTA revealed an increased vascular density and perfusion area of the superficial vascular complex and deep vascular complex in CRB1-eoRD.

Conclusions: LCA emerges as a frequently occurring phenotype in CRB1-eoRD. The unique features of SSOCT and SSOCTA are illustrated, and the novel biomarker, I/O ratio, may facilitate early diagnosis. The insights gained from this study hold significant value in determining the treatment window for potential forthcoming CRB1 gene therapy.

Abstract No.: 201146
Is There a Retinopathy of Prematurity (ROP) epidemic? Results From a Decade of ROP Experience at a Tertiary Care Center in Kerala, South India

First Author: Natasha ***RADHAKRISHNAN***

Purpose: To compare the incidence of ROP (any stage) and treatment requiring ROP between 2009-2013 and 2019-2023,10 years apart, and to compare the demographics of premature births screened for ROP, including gestational age and birth weight, in this study period.

Methods: We conducted a retrospective comparative study of the data from a tertiary care center during the period of 2009-2013 and 2019-2023. In our center, from 2009 to 2023, babies less than 35 weeks and <2000 g are routinely screened for ROP.

Results: A total of 343 babies were screened, of which 58 babies developed ROP, and 20 babies (5.8%) developed treatment requiring ROP. From 2019 to 2023, we screened 771 babies of which (16.6%) 128 babies developed ROP and 6.5% required treatment. The mean birth weight between 2009 and 2013 was found to be 1.08 (0.402) and the mean birth weight between 2019 and 2023 was found to be 1.50 (0.595)., it was not statistically significant (P = 0.0064). The mean gestational age between 2009 and 2013 was found to be 29.36 (2.789) and the mean gestational age between 2019 and 2023 was found to be 30.36 (2.946).

Conclusions: The increase in the number of premature babies that required screening was more than double, one decade apart, showing that the number of premature births is increasing significantly. This requires more training of ophthalmologists to be able to take up the screening burden, but the fact that treatment requiring ROP has not increased so much is, to some extent, reassuring.

Abstract No.: 200757
Macular Massaging in Traumatic Pediatric Macular Holes: A Case Series

First Author: Venugopal ***REDDY***
Co-Author(s): Aayesha ***KHANUM***

Purpose: To explore the use of macular massage as a potential treatment option, especially in traumatic and chronic cases with elements of chorioretinal scarring and adhesion, with the technique of using the internal limiting membrane (ILM) flap as a scaffold to decrease inadvertent trauma to the retina.

Methods: Three patients, aged 9 to 13 years, with traumatic pediatric macular holes underwent macular massage as a primary treatment at our institution between 2023 to 2024. All patients had a history of ocular trauma, with the time from injury to presentation ranging from 6 to 8 months. The same macular massage technique was used in all the cases by the same surgeon. ILM peeling was done up to the arcades superiorly and inferiorly, and 2 disc-diameters temporally. The peeled ILM tissue was used as a scaffold under a TANOS diamond duster to reduce inadvertent trauma to retinal tissue.

Results: Type 1 macular hole closure in all the patients with postoperative three-month visual acuity ranging from 20/20 to 20/80.

Conclusions: The existing literature on the management of traumatic pediatric macular holes is limited. In our case series, we highlight that macular massaging technique, especially in post-traumatic scenarios where additional elements of chorioretinal scarring and poor retinal elasticity are present, provided excellent outcomes. The present case series represents an important addition to the existing knowledge on the management of traumatic pediatric macular holes and adds to the growing body of evidence supporting the use of macular massage as a viable treatment option.

Abstract No.: 200141
Neonatal Intensive Care Unit (NICU)–Based Screening of Retinopathy of Prematurity (ROP)

*First Author: Ferdous Akhter **JOLLY***
*Co-Author(s): Tariq Reza **ALI**, Nuzhat **CHOUDHURY***

Purpose: Different studies suggest different incidences of ROP in different countries. Usually, babies are brought to a retina specialist on specific days for screening. This study aimed to see the exact incidence of ROP in different NICUs in a specific city area and to find out the perinatal and maternal risk factors in our community.

Methods: A prospective cross-sectional study was conducted to screen infants with gestational age at or less than 35 weeks and/or birth weight below 2000 grams from different NICUs of selected hospitals in a specific city after taking written informed consent from the parents. The eye examination was performed up to 44 weeks of gestation following the routine procedure of ROP examination.

Results: 350 infants were screened for ROP from NICUs of 5 tertiary care hospitals of a city. ROP was present in 38% of the sample. Additionally, 11.5% of the cases were identified as plus disease, 7.7% as preplus disease, and 23.1% as aggressive ROP. The study identified several neonatal risk factors associated with ROP, including low birth weight, preterm birth, jaundice, sepsis, blood transfusions, and length of hospital stay. Maternal risk factors included thyroid disorders and preeclampsia/eclampsia.

Conclusions: Higher prevalence of ROP has been observed in the study sample with greater presentation of severity and aggressive ROP. These results not only stress the need for vigilant screening and early intervention but also call for comprehensive strategies addressing both neonatal and maternal health to mitigate the impact of ROP and improve outcomes for at-risk infants.

Abstract No.: 200267
Oral Widefield Fluorescein Angiography (FFA) in Pediatric Coats' Disease: A Safer Imaging Alternative

*First Author: Manoharan **SHUNMUGAM***
*Co-Author(s): Ganeshwary **RAJAMANICKAM**, Yi Hen **WONG***

Purpose: To demonstrate the effectiveness of oral widefield FFA as a practical and child-friendly alternative to intravenous FFA in diagnosing and managing Coats disease.

Methods: An 8-year-old boy with unilateral Coats disease underwent multimodal imaging. Oral FFA was performed using an Optos widefield system, with fluorescein dye ingested in orange juice. OCT and B-scan ultrasonography were also used to evaluate structural and posterior segment changes.

Results: Initial visual acuity was 6/60 in the right eye and 6/12 in the left eye. Oral FFA revealed aneurysmal and telangiectatic vessels with diffuse leakage and peripheral non-perfusion in the right eye. OCT quantified subretinal fluid extent. No calcifications were seen on B-scan. Based on these findings, intravitreal anti-VEGF therapy was administered. At one-month follow-up, subretinal fluid had reduced and visual acuity improved to 6/36.

Conclusions: Oral widefield FFA enabled safe, high-resolution peripheral vascular imaging without sedation or intravenous access. It proved valuable for early diagnosis and treatment planning in pediatric Coats disease, reinforcing its clinical utility for retinal vascular assessment in children.

Abstract No.: 201126
Preliminary Analysis of Retrospective Data on Refractive Error in Urban Children From Eye Screenings conducted by the Malaysian Advocacy for Myopia Prevention and Its Associated Institutions

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Purpose: To investigate prevalence and age-specific patterns of refractive errors, particularly myopia and astigmatism, among primary schoolchildren in Malaysia, and to evaluate associations with age and gender using World Health Organization (WHO) definition of myopia.

Methods: A cross-sectional vision screening was conducted among 459 children aged 6–12 years between 2022 and 2024 from four urban schools in Klang Valley by the Malaysian Advocacy for Myopia Prevention (MAMP) and Vista Eye Center. Refractive error was categorized based on WHO criteria: myopia as spherical equivalent ≤−0.50 diopters (D). Chi-square tests and Cramer's V were used to assess associations between refractive status, age, and gender.

Results: There was a Malay majority (74.1%). Overall, refractive errors were seen in 57.3% (high myopia (<6D) 2.0%; myopia 33.6%; hyperopia (≤+0.5D), 7.4%; astigmatism 41.0%). Myopia prevalence was highest at age nine years (44.7%), followed by a stabilization in older age groups (31–41%) and was not significantly associated with age (χ^2 = 6.438, P = 0.312; Cramer's V = 0.124). Gender differences in myopia were negligible: 34.7% in females vs. 32.3% in males (P = 0.647; Cramer's V = 0.026). Astigmatism was most prevalent at age six (55.3%), which declined significantly with increasing age (χ^2 = 25.810, P < 0.001; Cramer's V = 0.237). Gender was not associated with astigmatism (P = 0.583).

Conclusions: Myopia affects one-third of schoolchildren in Malaysia by age 12, with a peak prevalence at age 9. Astigmatism declined with age. This emphasizes the importance of early and routine vision screening in school health programs, particularly those under age nine.

Abstract No.: 200798
Redetachment Rates in Traumatic Versus Atraumatic Pediatric Rhegmatogenous Retinal Detachment (RRD) – A Retrospective Study

*First Author: Harsh **JAIN***
*Co-Author(s): Mounika **BOLISETTY**, Subhasree **DATTA**, Aditya **KELKAR***

Purpose: To compare redetachment rates and timing of recurrence in traumatic versus atraumatic pediatric RRD, with a focus on early postoperative outcomes.

Methods: This retrospective study analyzed patients under 18 years of age who underwent surgical repair for RRD at a tertiary center in India between January 2020 to December 2022, with a follow-up of at least two years. Baseline demographics, trauma details, detachment characteristics, surgical approach, tamponade, and postoperative outcomes were recorded. The primary outcome was time to recurrent RRD in traumatic versus atraumatic eyes, assessed using Kaplan–Meier survival analysis. Secondary outcomes included cumulative redetachment rates, visual acuity, and complications at days 30, 90, 180, 365, and 730.

Results: Among 41 eyes, 16 (39%) had traumatic and 25 (61%) had atraumatic RRD. Traumatic cases involved younger children, longer symptom duration (30 vs. 7 days, P = 0.04), and poorer preoperative best-corrected visual acuity (P = 0.04). Redetachment occurred in 13 eyes (32%), despite the presence of silicone oil tamponade in all cases. At three months, the cumulative redetachment risk was 31.2% (95% confidence interval [CI]: 14.2–55.6%) in traumatic eyes versus 12% (95% CI: 4.2–30%) in atraumatic eyes. At two years, redetachment rates were 38% (95% CI:

18.5–61.4%) versus 28% (95% CI: 14.3–47.6%), respectively (log-rank P = 0.46). Multivariable analysis showed a 25% higher redetachment risk in traumatic cases (hazard ratio: 1.25; 95% CI: 0.4–3.9).

Conclusions: While overall redetachment rates were similar, traumatic pediatric RRDs showed significantly earlier recurrence. These findings support intensive early postoperative surveillance, ideally including monthly examination under anesthesia, in such cases.

Abstract No.: 201279
Retinopathy of Prematurity (ROP): A Systematic Review and Meta-Analysis of Disease Burden, Screening Practices, and Management Gaps

First Author: Roshija ***KHANAL RIJAL***
Co-Author(s): Amrit ***BANSTOLA****, Sunita* ***TIMILSENA***

Purpose: To evaluate the prevalence of ROP and identify health care delivery and management gaps across the South Asian Association for Regional Cooperation (SAARC) nations, with the aim of informing regional screening policies and neonatal care strategies.

Methods: A systematic review was conducted using PubMed, Scopus, and Google Scholar for studies published between January 2000 and May 2025, focusing on ROP prevalence, screening protocols, and treatment outcomes in SAARC countries. Eligibility criteria included observational studies on ROP incidence or burden among preterm infants. The Newcastle-Ottawa Scale was used to assess study quality. Data were extracted and pooled using a random-effects meta-analysis model. Subgroup analyses were performed by country and health care setting.

Results: A total of 32 studies across six SAARC countries were included, comprising over 18,000 preterm infants. The pooled prevalence of any-stage ROP was 28.6% (95% confidence interval [CI]: 24.1–33.4%), with treatment-requiring ROP observed in 7.8%. Screening coverage varied widely, from 12% in rural neonatal intensive care units to >70% in urban tertiary centers. Major gaps included delayed screening initiation, lack of trained personnel, poor follow-up systems, and limited access to laser or anti–vascular endothelial growth factor therapy, particularly in low-resource settings.

Conclusions: ROP represents a significant but under-addressed public health concern in SAARC nations. Wide disparities in screening coverage and treatment access point to systemic health care gaps. Strengthening neonatal screening protocols, building retinal care capacity, and integrating ROP into national child health programs are essential steps toward preventing avoidable childhood blindness in the region.

Abstract No.: 200137
Retrospective Records–Based Study on the Morphologies of Retinochoroidal (RC) Coloboma and Comparison With the Lingam Gopal (LG) Classification

First Author: Sony ***SINHA***
Co-Author(s): Dev ***KANT****, Amit* ***KUMAR****, Roshan* ***KUMAR***

Purpose: To determine the morphologic characteristics of RC coloboma and the clinico-demographic characteristics of the patients affected.

Methods: A review of 86 case records was conducted at the retina clinic of a tertiary hospital in Eastern India. Affected patients underwent detailed ocular and systemic examination, including classification of RC coloboma using Ida-Mann (IM) and LG classification systems. Results were tabulated in a spreadsheet, and statistical analysis was performed using Jamovi software.

Results: The median age was 17 years (range 3 weeks to 75 years). There was predominance of males (48, 58%) and children (58, 67%). Bilateral occurrence of RC coloboma (57, 66%) was more predominant in children (P = 0.003). Associated abnormalities included microcornea (22, 26%), strabismus (21, 24%), and others. Patients most commonly presented with diminution of vision (71, 83%), and 8 were blind (9%). Cataracts were present in 26 (30%)

patients, bilateral retinal detachment in 4 (5%), and unilateral in 12 (14%). Of the 143 eyes with RC coloboma, the most commonly encountered morphologies were IM Class 1 and LG Class I in both unilateral and bilateral cases. Complex coloboma with morphologies overlapping with multiple IM classes was observed in 9 eyes (6%). The class of RC coloboma could not be determined in 27 eyes due to coexisting ocular pathology (19%).

Conclusions: This is one of the few studies elaborating on the morphologies of RC coloboma in India, utilizing both IM and LG systems. A high proportion of patients with visual impairment, cataracts, and retinal detachment is a cause of concern.

Abstract No.: 201041
Retrospective Study on the Use of Atropine Eye Drops for Myopia Control in Children With Retinopathy of Prematurity (ROP)

First Author: Moses Job ***DUMAPIG***
Co-Author(s): Wei-chi ***WU***

Purpose: To evaluate the effect of atropine eye drops on myopia progression and ocular biometric parameters in children with a history of ROP.

Methods: This retrospective cohort study included 63 children aged 5–16 years diagnosed with ROP. Patients were grouped based on atropine use: 22 received atropine for a mean duration of 32.1 months, while 41 did not. Spherical equivalent (SE), axial length (AL), anterior chamber depth (ACD), lens thickness (LT), corneal curvature (CC), and best-corrected visual acuity (BCVA) were measured at baseline, 6–12 months, and final follow-up. Group comparisons were made using independent t-tests with a significance threshold of $P < 0.05$

Results: No significant difference was observed in SE progression between the atropine and non-atropine groups at any time point (final SE: −1.93 diopters [D] vs. −1.79 D; $P = 0.801$). However, a statistically significant increase in ACD was found in the atropine group at both 6–12 months ($P = 0.004$) and final follow-up ($P = 0.015$). Other parameters, including AL, LT, CC, and BCVA, showed no significant differences in absolute changes.

Conclusions: Atropine eye drops did not significantly reduce myopia progression in children with ROP but were associated with increased anterior chamber depth. This suggests atropine may have anatomical effects independent of refractive control in this population.

Abstract No.: 200517
Small Eye, Big Clues: Uncovering a Rare Case of Aicardi Syndrome in a Two-Month-Old Filipino Infant With Ocular and Neurologic Manifestations

First Author: Alvina Pauline ***SANTIAGO***
Co-Author(s): Pauline Gabrielle ***LACSAMANA***

Purpose: To report a rare neuro-ophthalmic case in a two-month-old female infant presenting with early ocular signs leading to the diagnosis of Aicardi syndrome.

Methods: A full clinical evaluation, ocular imaging, neuroimaging, electrophysiologic testing, and genetic workup were performed. The patient was born at term to a 33-year-old G1P0 mother after an otherwise unremarkable pregnancy, except for a third-trimester anomaly scan, which showed multiple choroid plexus and subarachnoid cysts, absent corpus callosum, ventriculomegaly, and talipes equinovarus.

Results: At birth, the infant was noted to have difficulty opening the left eyelid. Ophthalmologic examination revealed a normal right eye (corneal diameter ~9 mm) and a smaller left eye with entropion, microcornea (4 mm), and microphthalmia. Fundus imaging (RetCam) showed peripheral chorioretinal lacunae and a large, irregular optic disc suggestive of coloboma. Visual evoked responses were absent in both eyes. Cranial ultrasound confirmed agenesis of the corpus callosum, ventriculomegaly, and cystic changes. Karyotyping showed a normal 46,XX pattern. At two months, the patient began experiencing 3–4 seizures per day, for which she was started on phenobarbital. Electroencephalogram

revealed multifocal interictal epileptiform discharges.

Conclusions: This case demonstrates the early presentation of the classic triad of Aicardi syndrome, which includes agenesis of the corpus callosum, chorioretinal lacunae, and infantile spasms. It highlights the critical role of ocular findings in prompting early diagnosis of this rare neurodevelopmental disorder. Despite a normal karyotype, the clinical triad and imaging findings support this unique and rarely encountered diagnosis.

Abstract No.: 201224
The Silent Fight: A Ten-Year Journey Against Retinopathy of Prematurity (ROP) in a Rural Setup in India

First Author: Rajiv ***GANDHI***

Purpose: The purpose of this paper is to document and evaluate a ten-year journey of combating ROP in a rural health care setting in India. It aims to highlight the challenges faced, strategies implemented, and outcomes achieved in establishing and sustaining an ROP screening and treatment program in a resource-limited environment. By sharing this experience, the paper seeks to offer insights and a replicable model for improving neonatal eye care in other underserved regions.

Methods: All the infants who underwent ROP screening and management by a particular vitreoretinal consultant (Dr. Rajiv Gandhi) at Anupam Eye Hospital and Laser Center, Akluj and all other neonatal intensive care units in the last 10 years were recorded and compiled. All the awareness programs conducted and strategies implemented to improve the screening and follow-up were recorded and included.

Results: Over the course of 10 years, a structured ROP screening and intervention program was successfully implemented in a rural healthcare setup. Key outcomes included: Increased screening coverage, early detection, timely intervention, capacity building, and community impact. Data collected over 10 years reveal a marked decline in advanced-stage ROP cases and improved visual outcomes in preterm infants.

Conclusions: Journey underscores the importance of capacity building, interdisciplinary collaboration, parental education, and policy advocacy in bridging the urban-rural divide in neonatal eye care. The findings reaffirm that with perseverance and innovation, silent battles such as ROP can be fought and won, even in the most underserved areas.

Retina (Medical)

Abstract No.: 201230
"Fighting Fire Before It Starts": Anterior Chamber (AC) Anti–Vascular Endothelial Growth Factor (Anti-VEGF) Supplementation in Proliferative Diabetic Retinopathy (PDR) Without Visible Neovascularization of the Iris (NVI)

First Author: Hardik ***KIRI***
Co-Author(s): Sukriti ***GUPTA****, Kritika* ***SINGH***

Purpose: To evaluate the safety and efficacy of concurrent AC ranibizumab supplementation alongside intravitreal anti-VEGF in eyes with PDR but no clinically visible NVI.

Methods: A retrospective comparative analysis was conducted on 100 eyes with treatment-naïve PDR without visible NVI. Group A (n = 50) received only intravitreal anti-VEGF (0.05 mL ranibizumab), while Group B (n = 50) received the same intravitreal injection along with 0.025 mL ranibizumab in the AC. Outcomes were assessed at six-month follow-up.

Results: New-onset NVI/neovascularization of the anterior chamber angle (NVA) was observed in five eyes (10%) in Group A and zero eyes (0%) in Group B. The mean intraocular pressure at six months was 16.2 ± 2.5 mmHg (Group A) versus 15.8 ± 2.7 mmHg (Group B). AC inflammation > Grade 1 occurred in two eyes (4%) in Group A and three eyes (6%) in Group B. PRP augmentation was needed in 22 eyes (44%) in Group A and 16 eyes (32%) in Group B. One eye (2%) in Group A progressed to neovascular

glaucoma; none did in Group B. No corneal or endothelial complications were noted.

Conclusions: This real-world retrospective analysis suggests that AC supplementation of ranibizumab is safe and may reduce early neovascular changes in high-risk PDR eyes, even without visible NVI. This dual-compartment VEGF suppression may be particularly useful in patients with poor follow-up adherence. By proactively targeting subclinical anterior segment VEGF, this method may delay the onset of neovascular glaucoma in vulnerable patients.

Abstract No.: 201217
A Case Report of Branch Retinal Vein Occlusion (BRVO) in a 27-Year-Old Transgender Woman on Hormone Replacement Therapy

*First Author: Camille Constancia **ROBLES***
*Co-Author(s): Eda Jane **FENEQUITO***

Purpose: To present a case of BRVO in a 27 year-old transgender woman receiving hormone replacement therapy.

Methods: An observational case report.

Results: A 27-year-old transgender woman presented with a two-week history of blurred vision in the right eye, beginning in the superior visual field and progressing inferiorly. The symptom was painless, no eye redness, discharge, or systemic manifestations. Initially untreated, she later consulted a private ophthalmologist and was diagnosed with BRVO. She was referred to our institution for further management. The patient had no known cardiovascular risk factors and denied smoking, thromboembolic history, or systemic illness. She had been on gender-affirming hormone therapy (GAHT) for five years, consisting of weekly intravenous estrogen and daily oral spironolactone. Body mass index was 24.2 kg/m². On examination, best-corrected visual acuity (BCVA) was 20/200 in the right eye and 20/20 in the left. Intraocular pressure was 12 mmHg in both eyes. Anterior segment exam was unremarkable. Funduscopy of the right eye revealed flame-shaped hemorrhages along the inferotemporal arcade, consistent with BRVO. Optical coherence tomography showed macular edema with intraretinal and subretinal fluid. Systemic evaluation—including fasting glucose, lipid profile, inflammatory markers, and coagulation studies—was within normal limits. The patient underwent a three-month course of intravitreal bevacizumab. Post-treatment, it showed resolution of edema and BCVA improved to 20/15.

Conclusions: This case highlights GAHT as a potential risk factor in atypical retinal vein occlusions, emphasizing the necessity of thorough hormonal and pharmacologic history assessment.

Abstract No.: 200888
A Case Report of Eales Disease in an 18-year-old Filipino Male

*First Author: Izza **ITALIA***
*Co-Author(s): Karl Adrian **TINIO***

Purpose: To present a case of Eales disease in a young Filipino male, which provides a valuable clinical model for the recognition, diagnosis, and effective management of the disease.

Methods: A case report.

Results: This case report details the presentation of an 18-year-old male with a one-month history of bilateral blurring of vision and floaters. A comprehensive ophthalmologic examination, including visual acuity testing, slit-lamp biomicroscopy, fundoscopy, optical coherence tomography (OCT), and fundus fluorescein angiography, was performed. The patient's visual acuity was 20/150 in the right eye and 20/80 in the left eye. The right eye presented with vitreous hemorrhage, while the left eye showed perivascular sheathing and proliferative fibrovascular membranes. The OCT showed a cystoid macular edema without disorganization of the retinal inner layers (DRIL). Fluorescein angiography revealed peripheral capillary nonperfusion, vascular leakage, and neovascularization. A systemic workup ruled out other potential causes of retinal vasculitis. The patient was treated with immunosuppressants

and anti–vascular endothelial growth factor intravitreal injections.

Conclusions: The diagnosis of Eales disease was made based on the clinical presentation of recurrent retinal and vitreous hemorrhage, peripheral occlusive vasculitis, and neovascularization in a healthy young male, after excluding other systemic causes. The report highlights the most challenging aspect of Eales disease: it is a diagnosis of exclusion.

Abstract No.: 201356
A Case of Bilateral Combined Retinal Artery and Retinal Vein Occlusion Secondary to Anti-Neutrophil Cytoplasmic Antibody (ANCA)–Associated Occlusive Vasculitis

First Author: Jed Mikhail ***TABANGCURA***
Co-Author(s): Dominique Nicole ***FERNANDEZ***

Purpose: To present a case report of a previously healthy 28-year-old Filipino female who presented in our clinic as a case of ANCA-associated vasculitis with bilateral severe blurring of vision (BOV) as the manifestation.

Methods: A previously healthy young female presented with progressive BOV initially in the right eye, followed by the left one month later. Workup, including fluorescein angiography, optical coherence tomography (OCT), and systemic testing revealed bilateral combined retinal artery and vein occlusion secondary to ANCA-associated vasculitis. She was treated with intravenous methylprednisolone, then oral prednisone (1 mg/kg/day), later transitioning to methotrexate. Serial imaging was done to monitor treatment response.

Results: On presentation, best-corrected visual acuity (BCVA) was 20/400 in the right eye (OD) and 20/320 in the left (OS). Fundus exam showed retinal whitening, vascular attenuation, intraretinal hemorrhages, and cherry-red spots. Fluorescein angiography revealed delayed filling, pruned vessels, vascular staining, and widespread capillary nonperfusion. OCT showed bilateral cystoid macular edema (CME). Repeat imaging during steroid therapy showed resolution of CME and whitening, but persistent ischemia, macular thinning, and new disc neovascularization. BCVA remained poor (OD 20/400, OS 20/200). Panretinal photocoagulation (PRP) was done in both eyes. Recurrent vitreous hemorrhages required anti–vascular endothelial growth factor injections and eventual vitrectomy in the right eye. No other systemic involvement was noted.

Conclusions: ANCA-associated vasculitis can cause severe bilateral retinal vascular occlusion in young patients, leading to poor visual outcomes despite treatment. Early recognition is essential to prevent complications. Clinicians should consider this diagnosis in young patients with unexplained retinal ischemia to guide timely intervention and reduce systemic morbidity.

Abstract No.: 200737
A Case of Bullous Central Serous Chorioretinopathy (bCSCR) Treated With Intravitreal Bevacizumab

First Author: Juan ***LOPEZ***
Co-Author(s): Kristine ***CORPUS-VELASQUEZ****, Robbie Alyssa* ***MALIWAT***

Purpose: This study reports a case of bCSCR treated with intravitreal injection of bevacizumab in one eye in a patient with multiple comorbidities.

Methods: A 50-year-old male presented with a one-month history of sudden onset of blurring of vision in the right eye, described as a central dark spot and subsequent blurring of vision in the left eye. Fundoscopy revealed a broad-based shallow submacular fluid on the right eye and an inferior bullous retinal detachment without visible breaks in the left eye. Macular optical coherence tomography scan (OCT-M) revealed serous pigment epithelial detachment in the left eye and neurosensory retinal detachment in both eyes. In the second month from the onset of symptoms, intravitreal bevacizumab was injected in the right eye. A month later, there was a significant decrease in the subretinal fluid in the right eye and spontaneous resolution of the bullous retinal detachment on the left eye, which prompted systemic evaluation and yielded a positive

interferon-gamma release assay. The patient was then initiated on anti-tubercular therapy.

Results: Repeat OCT-M after the second dose of intravitreal bevacizumab in the right eye revealed complete resolution of serous detachment, while the untreated left eye demonstrated persistent but markedly decreased serous detachment.

Conclusions: Intravitreal bevacizumab appears to have a potential benefit in hastening resolution of serous detachment in patients with bCSCR compared to observation alone and could also have therapeutic effects on the fellow eye.

Abstract No.: 201332
A Case of Postoperative Endophthalmitis Treated With Topical Fortified Imipenem

First Author: Jose Leandro Manuel ***AMORADO***
Co-Author(s): Jocelyn ***SY***

Purpose: To report a case of postoperative endophthalmitis whose management included topical imipenem. To the author's knowledge, there are only a few published journals reporting the use of topical imipenem, and there have been none reported regarding its use for endophthalmitis.

Methods: This is a case report of a 60-year-old female who underwent phacoemulsification of the left eye. Intraoperatively, there was a posterior capsular rupture and she also underwent anterior vitrectomy. One day postoperatively, vision of the left eye was 20/50 with noted vitreous strand extending to the main port. The rest of the exam was unremarkable. Six days postoperatively, she experienced sudden blurring of vision of the operated eye, which was now hand movement. She was managed as a case of endophthalmitis and underwent pars plana vitrectomy and intravitreal injection of antibiotics for three total doses. Fortified vancomycin and ceftazidime eye drops were started post-vitrectomy. Vitreous tap culture revealed Acinetobacter lwoffi, which was sensitive to imipenem. The topical antibiotics were then shifted to fortified imipenem.

Results: The improvement in the patient's eye coincided with the initiation of fortified imipenem. The patient did not experience any adverse effect toward it. The patient's vision gradually improved from hand movement to 20/50. Currently, the left eye is quiet with an unremarkable fundus examination.

Conclusions: Fortified vancomycin and ceftazidime are commonly used topical medications for endophthalmitis. However, it is important to report the use of other fortified antibiotics as this will add information regarding its efficacy and adverse effects.

Abstract No.: 201195
A Thief of Sight: Visual Loss From a Vascular Steal Phenomenon

First Author: Maria Katrina ***MALGAPU-UY***
Co-Author(s): John Philip ***UY***

Purpose: To describe a case of posture-dependent monocular visual dimming, ipsilateral to subclavian steal syndrome, and concurrent carotid artery disease.

Methods: A case report.

Results: A 50-year-old male presented with posture-induced episodes of transient visual dimming in the left eye, occurring several months after undergoing pars plana vitrectomy. Best-corrected visual acuity was 20/20. Ocular examinations, including slit-lamp biomicroscopy, fundus evaluation, fluorescein angiography, macular optical coherence tomography, and standard perimetry, were all unremarkable. Since no local ocular cause could be identified, a systemic etiology was considered. Carotid duplex ultrasound eventually revealed retrograde flow in the left vertebral artery, confirming subclavian steal syndrome, along with mild bilateral carotid stenosis. He was also recently diagnosed with diabetes and dyslipidemia.

Conclusions: Subclavian steal syndrome typically results from significant stenosis of the proximal subclavian artery, causing reversed flow in the vertebral artery and reduced posterior cerebral perfusion. It often presents with bilateral visual disturbances with

homonymous hemianopsia, dizziness, and neurologic symptoms. However, in our case, it presented atypically with isolated ipsilateral monocular transient visual loss. This could reflect hemodynamic instability or altered circulation, particularly in patients with other vascular risk factors. This case underscores the diagnostic challenge posed by unilateral transient visual symptoms in the setting of normal ocular findings. Though classically associated with bilateral deficits, subclavian steal syndrome may, albeit rarely, present with unilateral visual disturbances, reflecting the subtle interplay between systemic vascular pathology and visual cortex perfusion. Recognizing such atypical manifestations is essential in preventing misdiagnosis and ensuring timely vascular intervention.

Abstract No.: 200786
Aicardi Syndrome: A Case Report

*First Author: Rachelle **ANZURES***
*Co-Author(s): Janina Faye **CORCUERA***

Purpose: To describe a rare case of Aicardi syndrome diagnosed in a one-week-old asymptomatic female infant through routine ophthalmologic evaluation, highlighting the diagnostic value of ocular findings in syndromic conditions.

Methods: A one-week-old female neonate with a diagnosis of agenesis of the corpus callosum was referred for baseline ophthalmologic evaluation. At the time of consultation, the patient was asymptomatic with no seizures or neurologic deficits noted. Indirect ophthalmoscopy and a widefield retinal camera were performed to screen for associated ocular abnormalities.

Results: Fundus examination revealed multiple, well-circumscribed chorioretinal lacunae bilaterally, predominantly in the posterior pole. Given the presence of pathognomonic retinal findings and known agenesis of the corpus callosum, the possibility of Aicardi syndrome was raised. Further neurologic assessment and genetic evaluation were pursued, and a syndromic diagnosis was subsequently established. The patient was referred for early multidisciplinary care.

Conclusions: This case demonstrates that Aicardi syndrome can be diagnosed in the neonatal period even in the absence of overt neurologic symptoms. Ophthalmologic evaluation plays a crucial role in identifying pathognomonic retinal findings that prompt early diagnosis and timely multidisciplinary care.

Abstract No.: 200307
Altered Sleep Quality in Patients With Bilateral Age-Related Macular Degeneration (AMD)

*First Author: Raymond **NAJJAR***
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Purpose: This study investigates changes in sleep quality and mood in patients with AMD.

Methods: Patients with AMD (n = 87) and healthy controls (n = 50) were recruited. Participants completed the Pittsburgh Sleep Quality Index (PSQI) and Patient Health Questionnaire-9 (PHQ-9) for assessment of subjective sleep quality and depression, respectively. All participants underwent 7-21 continuous days of objective rest-activity/sleep monitoring using wrist actimetry. Outcome measures (questionnaire scores, sleep onset latency [SOL], sleep efficiency [SE]) were compared between controls, unilateral (n = 37), and bilateral (n = 50) AMD, using a general linear model with post-hoc analysis (covariates age and gender).

Results: Patients with AMD showed increased SOL (23.2 ± 21.1 min, $P = 0.03$), compared to controls (16.4 ± 12.4 min). In addition, AMD patients had increased PSQI (reduced sleep quality, $P < 0.05$) and PHQ-9 (worse mood, $P < 0.001$) scores. In subgroup analysis, sleep quality was found to be spared in unilateral AMD (100% late AMD), while bilateral AMD (36% bilateral early-stage AMD) had a ~11 min increase in SOL ($P = 0.02$), and a ~5-7% reduction in SE, compared to both controls and unilateral AMD (both, $P < 0.01$). Bilateral AMD

had higher PHQ-9 scores, compared to controls ($P < 0.01$).

Conclusions: Patients with AMD have altered sleep quality. This is particularly pronounced in bilateral AMD, whereas sleep quality is preserved in unilateral AMD, regardless of AMD severity. Overall, these findings suggest that laterality rather than severity is the more significant factor in AMD-related sleep disturbance.

Abstract No.: 200195
Analyzing Trends in Age-Related Macular Degeneration (AMD) Research

*First Author: Sheng-yao **HSU***

Purpose: In the literature, none specifically delves into the trends based on document categories. In this study, we introduce a unique triple-map Sankey diagram (TMSD) to assess the evolution of AMD research in determining whether AMD research trends have shifted over the past decade.

Methods: We collected articles and review pieces related to AMD written by ophthalmologists from the Web of Science core collection. To delve into the characteristics of these AMD articles, we employed various visualization methods, with a special focus on TMSD to track research evolution. We adopted the descriptive, diagnostic, predictive, and prescriptive analytics (DDPP) model, complemented by the follower-leading clustering algorithm (FLCA) for clustering analysis.

Results: Our findings indicate that, among countries, institutions, years, authors, and journals, the dominant entities were the United States, the University of Bonn in Germany, the year 2021, Dr. Jae Hui Kim from South Korea, and the journal Retina. In accordance with the TMSD, AMD research trends have not changed significantly since 2014. As the top four categories for citing, active and cited articles have remained consistent: Ophthalmology, Science & Technology Other Topics, General & Internal Medicine, and Pharmacology & Pharmacy.

Conclusions: Such tools are especially valuable for streamlining the visualization of the intricate data often seen in bibliometric studies.

Abstract No.: 200821
Anterior Segment Optical Coherence Tomography (ASOCT) Features in Eyes With Pachychoroid Spectrum Disease (PSD): A Comparative Study

*First Author: Gemmy **CHEUNG***
*Co-Author(s): Joshua **LIM***

Purpose: To evaluate ASOCT and ocular biometric characteristics in eyes with PSD compared to normal controls.

Methods: This retrospective, cross-sectional study included 37 eyes from 23 patients with PSD and 14 eyes from 7 normal controls. The pachychoroid group comprised eyes diagnosed with PSD, including central serous chorioretinopathy, pachychoroid pigment epitheliopathy, or pachychoroid neovasculopathy, based on characteristic features such as an increased subfoveal choroidal thickness, pachyvessels, and choroidal hyperpermeability. The control group included matched eyes without retinal pathology or pachychoroid features. ASOCT parameters assessed included central corneal thickness (CCT), anterior chamber depth (ACD), white-to-white distance (WTW), angle opening distance (AOD500, AOD750), and trabecular-iris space area (TISA500, TISA750) at nasal and temporal quadrants. Ocular biometric data, including axial length (AL) and subfoveal choroidal thickness (SFCT), were also analyzed. Univariate and multivariate analyses were performed with adjustment for age, gender, AL, and lens status.

Results: SFCT was markedly increased in the pachychoroid group (414.5 ± 67.2 μm) compared to controls (177.6 ± 81.3 μm). After adjustment for covariates, eyes with pachychoroid exhibited significantly shorter AL (23.26 ± 1.01 mm vs. 24.52 ± 2.06 mm; adjusted $P = 0.047$). Other ASOCT parameters, including CCT, ACD, WTW, AOD, and TISA metrics, showed nonsignificant differences, though temporal AOD and TISA metrics

appeared slightly reduced in pachychoroid eyes. Multivariate modelling was limited by sample size and the strong influence of SFCT.

Conclusions: Our results indicate that shorter AL is associated with pachychoroid. No significant differences in anterior chamber biometric characteristics were found.

Abstract No.: 200816
Assessing a 36-Week Refill-Exchange Regimen for the Port Delivery Platform With Ranibizumab (PDS) in Patients With Up to 2 Years' Diagnosis of Neovascular Age-Related Macular Degeneration (nAMD): Phase 3b Sightspire Trial

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Purpose: The PDS, a drug delivery system that continuously delivers ranibizumab into the vitreous, is approved in the US for nAMD with refill-exchanges every 24 weeks (Q24W). We report the study design of the ongoing, global, phase 3b Sightspire trial assessing PDS Q36W in patients with nAMD.

Methods: The single-arm Sightspire (NCT06847542) trial assesses the effectiveness, safety, and patient-reported outcomes (PROs) of PDS Q36W and Q24W in patients with nAMD. Eligibility criteria include nAMD diagnosis ≤24 months, prior anti–vascular endothelial growth factor (anti-VEGF) response, and best-corrected visual acuity (BCVA) ≥34 letters (20/200 Snellen). At week (W) 24, disease activity (BCVA: ≥5 letter decrease vs. last 2 measures, ≥10 letter decrease from best-recorded, central subfield thickness [CST]: ≥75 µm increase vs. last two measures, ≥100 µm increase vs. lowest measure, or new macular hemorrhage) will be assessed; patients without activity are assigned to the Q36W cohort; patients with activity are assigned to the Q24W cohort.

Results: Primary endpoint: change from baseline in best-corrected visual acuity (BCVA), averaged over W68 and W72 (Q36W cohort). Secondary outcomes include changes in BCVA scores, central point thickness (CPT), CST over time, and treatment and visit burden (Q36W cohort). PROs will assess patient preference for PDS versus intravitreal injections and the recovery experience. Sightspire also explores caregiver burden and whether PDS can help reduce it. Safety assessments include the incidence and severity of ocular and systemic adverse events.

Conclusions: Sightspire uniquely evaluates PDS treatment adaptability, visit flexibility, and clinical outcomes across a diverse patient population, supporting individualized treatment for the benefit of patients and caregivers.

Abstract No.: 200187
Association Between Mean Ocular Perfusion Pressure (MOPP) and Proliferative Diabetic Retinopathy (PDR) in a Northern Chinese Population

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*Co-Author(s): Fei **GAO**, Juping **LIU***

Purpose: To investigate whether MOPP increases the risk of PDR in patients with type 2 diabetes (T2DM) in Northern China.

Methods: A retrospective cross-sectional study was conducted using 1119 patient data from the Beichen Eye Study and 204 electronic medical records, covering the period from April 2000 to August 2024. Systolic blood pressure (SBP), diastolic blood pressure (DBP), and intraocular pressure (IOP) were measured. MOPP was calculated using the formula: MOPP = 2/3 [DBP + 1/3 (SBP − DBP)] − IOP. Multinomial logistic models and two-piecewise linear models were used to perform the regression analyses.

Results: The final analysis included 866 participants without diabetic retinopathy (NDR), 239 participants with non-PDR (NPDR), and 218 participants with PDR. When PDR group was set as reference, the odds ratio (OR) of MOPP (NDR: OR 0.92; 95% confidence interval [CI]: 0.89-0.95; NPDR: OR 0.94; 95% CI: 0.91-0.98) was lower than SBP and PP. In a model with MOPP, SBP and PP simultaneously as

covariates, the OR value of MOPP (NDR: OR 0.83; 95% CI: 0.77-0.89; NPDR: OR 0.89; 95% CI: 0.83-0.96) was lower than PP, while SBP was not statistically significant. Except for PP (P for likelihood test = 0.046), MOPP and SBP have no threshold effects for the association of PDR.

Conclusions: MOPP outperforms SBP and PP in predicting PDR risk, underscoring the synergistic role of IOP and BP in disease development.

Abstract No.: 200476
Association Between Peripheral Neuropathy (PN), Peripheral Vascular Disease (PVD), and Diabetic Foot Ulcers (DFU) to Diabetic Retinopathy (DR) Among Type 2 Diabetes Mellitus (DM) Patients in a Multispecialty Diabetes Center: A Retrospective Study

First Author: Ricardo Tobias ***PAPA***
Co-Author(s): Jordan ***PINZON****, Sherman* ***VALERO***

Purpose: This study aimed to explore the association between PN, PVD, DFU, and DR presence and severity in type 2 DM patients at a multispecialty diabetes center in a private tertiary hospital.

Methods: A retrospective cross-sectional analysis was conducted involving 178 adult type 2 DM patients, examining the relationships between DR and clinical indicators of PN, PVD, and DFU. Fundus imaging as interpreted by ophthalmology specialists was used to classify DR severity, while PN and PVD were assessed through standardized tests performed by board-certified nurses. DFU presence was inferred from ulcers and healing wounds. Associations were analyzed using chi-square, Fisher exact test, and multivariable logistic regression.

Results: The results revealed no significant association between DR and PN, as none of the patients with DR exhibited neuropathic signs. No association was found between DFU and DR presence (P = 0.565) and severity. However, PVD, indicated by abnormal Ankle Brachial Index (ABI) and weak or absent pulses, showed an association for both presence (P < 0.05) and severity of DR (P < 0.05). Specifically, high ABI was associated with an increased likelihood of DR (adjusted odds ratio [aOR] = 6.379, 95% confidence interval [CI]: 1.07, 38.041) and referable DR (aOR = 19.61, 95% CI: 2.92, 131.49).

Conclusions: These findings suggest that PVD markers, such as high ABI and abnormal pulses, may serve as surrogate indicators for the presence and severity of DR. Further studies are recommended to validate these findings.

Abstract No.: 200472
Association of Retinal Nonperfusion in Ultra-Widefield Fluorescein Angiography (UWF-FA) and Risk of Diabetic Retinopathy (DR) Progression

First Author: Paolo Antonio ***SILVA***
Co-Author(s): Kaye Lani Rea ***LOCAYLOCAY****, Maureen Anne* ***REYES***

Purpose: Capillary loss or nonperfusion is an important characteristic for DR and is found to be a risk factor for progression to proliferative DR. Moreover, it indicates microvascular damage and ischemia, usually seen in the peripheral retina further suggesting that peripheral nonperfusion plays an important role in DR progression. Current protocol for DR relies mainly on two fluorescein angiography fields as evaluated in the Early Treatment Diabetic Retinopathy Study (ETDRS), not accounting for the peripheral retina. The main objective of this study aimed to determine the association of nonperfusion seen on UWF-FA and the future worsening of DR severity scale (DRSS) and initiation of DR treatment in patients diagnosed with DR. Specifically, the study described the clinicodemographic profile of patients with DM in terms of sex, age, and type of diabetes mellitus (DM).

Methods: The graded nonperfusion index (NPI) for the UWF-FA photos were studied to establish the relevance of NPI and the incidence of DRSS worsening and DR treatment initiation. This retrospective cohort study included patients diagnosed with either type 1/type 2 DM with UWF-FA images taken from 2018 to 2020 and with followu-p UWF color

photos taken from 2020 to 2023 at a local tertiary hospital.

Results: NPI is the only variable showing statistically significant association with DR worsening, proving it to be a predictive marker for disease worsening especially in the early stages of DR.

Conclusions: Nearly half of the patients had DR worsening or required treatment after three years which should prompt clinicians for regular screening and earlier intervention.

Abstract No.: 201115
Asymmetric Diabetic Retinopathy (ADR) and Its Relationship to Carotid Artery Stenosis: A Single-Center Retrospective Analysis

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Purpose: ADR, seen in approximately 5–6% of patients with proliferative diabetic retinopathy, remains poorly understood. Carotid artery disease (CAD) has been suggested as a potential cause, though evidence is mixed. This study evaluates the relationship between ADR and CAD to assess potential clinical implications. Clarifying this link could enhance diagnostic pathways and guide resource allocation.

Methods: A retrospective review was conducted from September 2024 to February 2025 involving 14 patients diagnosed with ADR who underwent carotid artery doppler assessment. Demographics and diabetic retinopathy severity were recorded using the Early Treatment of Diabetic Retinopathy Study (ETDRS) international classification. ADR was defined as a ≥2-tier difference in retinopathy grade between eyes. Internal carotid artery (ICA) stenosis was graded by standard doppler velocity criteria. The presence, severity, and laterality of ICA stenosis were correlated with ADR presentation.

Results: Among 14 patients (7 male, 7 female; mean age 64, range 33–81), two (14.3%) had significant ipsilateral ICA stenosis: one moderate (>50%), one severe (>70%) requiring vascular referral. The remaining 12 (85.7%) had no significant ICA stenosis. Fisher Exact Test showed no statistically significant association between ADR and ICA stenosis compared to the expected 6% prevalence in the diabetic population (P = 0.23). No consistent pattern of laterality was observed.

Conclusions: These findings challenge the hypothesis of CAD as a major contributor to ADR. Larger studies using multimodal imaging are warranted to explore alternative mechanisms behind this condition, potentially enabling personalised risk stratification and appropriate allocation of clinical resources.

Abstract No.: 200356
Benign on Surface, Delusional at Core

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Purpose: To report a rare case of delusional parasitosis in a patient with recurrent retinal detachment, where detailed history-taking of seemingly benign floaters led to the diagnosis of an underlying psychiatric disorder.

Methods: A 48-year-old Asian female presented with recurrent retinal detachment and a macular hole in her right eye, following four previous retinal surgeries elsewhere. On presentation, she underwent fluid-air exchange, internal limiting membrane peeling using the inverted flap technique, membrane removal, endolaser, and silicone oil reinjection for macular hole with retinal redetachment. Despite successful anatomical repair with improved vision to 20/60, she continued to complain of persistent floaters. Detailed peripheral fundus examinations were normal. The surgeon, noting a mismatch between symptoms severity and findings, asked the patient to describe and draw the floaters.

Results: The patient illustrated six vivid, bizarre, shape-shifting creatures, with associated crawling sensations and unexplained sounds — features inconsistent with typical floaters. A psychiatric referral was made, and she was diagnosed with delusional parasitosis. She

was started on Risperidone 3 mg daily, with no extrapyramidal side effects, confirming the diagnosis. Over nine months, her hallucinatory symptoms resolved significantly.

Conclusions: This case highlights the critical role of attentive listening and comprehensive history-taking in identifying atypical presentations. Delusional parasitosis may masquerade as common ophthalmic complaints such as floaters, especially in patients with complex surgical histories. Timely psychiatric evaluation and treatment can lead to symptom resolution, underlining the need for a multidisciplinary approach in postoperative care.

Abstract No.: 200286
Beyond the Known: Expanding the Phenotype of Retinitis Pigmentosa (RP) in a Patient With Novel Mutation in ABCA4

*First Author: Steven Matthew **LEE***
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Purpose: RP is a hereditary retinal disease characterized by bone spicule pigmentation, waxy optic disc pallor, and vessel attenuation. It exhibits genotypic heterogeneity with involvement from multiple genes, including the ABCA4 gene. Stargardt disease (STGD) and ABCA4 retinopathies (ABCA4R), on the other hand, are caused by pathogenic variants in this gene. The ABCA4 gene encodes a protein that prevents the build-up of vitamin A derivatives toxic to the retinal pigment epithelium. This accumulation results in the characteristic yellow, pisciform flecks seen in STGD. Diagnosing ABCA4R is complex due to its phenotypic heterogeneity, with ABCA4 known to cause RP, STGD, and cone-rod dystrophy.

Methods: Thorough history taking, ocular examination, and inherited retinal dystrophy panel was conducted.

Results: A 30-year-old Asian male presented with poor bilateral vision since childhood. Best-corrected visual acuity was counting fingers at 1 foot in the right eye and hand movement in the left eye. Examination and diagnostics showed overlapping features of RP and STGD, with signs of a uveitic process, including mild inflammation and the presence of a unilateral persistent pupillary membrane. The uveitis work-up yielded inconclusive results. An inherited retinal dystrophy panel was subsequently performed, which revealed a compound heterozygous mutation in the ABCA4 gene, with one variant being novel (ABCA4 c.4253+5G>A, c.161-23T>A).

Conclusions: To our knowledge, this is the first reported case of ABCA4-RP caused by this novel compound heterozygous mutation. Our case contributes to incidence reporting and profiling of inherited retinal dystrophies and demonstrates their phenotypic and genotypic heterogeneity, which can aid in the diagnosis and management of these diseases.

Abstract No.: 200860
Bilateral Central Retinal Artery Occlusion (CRAO) After Paclitaxel in Breast Cancer

*First Author: Harsh **JAIN***
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Purpose: CRAO is an ophthalmic emergency and has been reported in association with systemic lupus erythematosus, antiphospholipid antibody syndrome, and giant cell arteritis. Paclitaxel, a taxane chemotherapeutic agent, widely used in the management of breast cancer, is known for its potential to cause neuropathy and hypersensitivity reactions. Ocular vascular events such as CRAO are exceedingly rare.

Methods: A 66-year-old woman undergoing chemotherapy breast cancer with paclitaxel reported acute, painless loss of vision in both eyes, approximately six hours after her second cycle of paclitaxel. On examination, her best-corrected Snellen visual acuity was reduced to 20/600 in her right eye and 20/400 in her left eye, with cherry-red spots in the macula and optical coherence tomography consistent with bilateral CRAO. She underwent immediate paracentesis and ocular massage in both eyes followed by hyperbaric oxygen therapy the next day and started receiving 75 mg of aspirin and 20 mg of atorvastatin daily.

Results: She underwent immediate paracentesis and ocular massage in both eyes followed by hyperbaric oxygen therapy. Imaging showed resolving CRAO in both eyes with persistent ischemia and a partial cherry-red spot in the right eye. At two months, both eyes improved to 20/60.

Conclusions: This case highlights rare but serious adverse event potentially linked to paclitaxel. Vascular toxic effects of the drug, including endothelial damage and vasospasm, are plausible mechanisms for CRAO. This case highlights the need for vigilance during paclitaxel therapy, as early recognition and prompt multidisciplinary care are crucial.

Abstract No.: 200676
Bilateral Risk and Progression of Macular Atrophy (MA) in Eyes With Type 3 Macular Neovascularization (MNV) Under Anti–Vascular Endothelial Growth Factor (Anti-VEGF) Therapy: A 36-Month Study

*First Author: Gemmy **CHEUNG***
*Co-Author(s): Noa **GILEAD**, Antoin **HUANG**, Zehua **JIANG**, Mohamed **SHERIF**, Chenxi **ZHANG***

Purpose: To evaluate the incidence and progression of MA and its impact on visual function in eyes with treatment-naïve type 3 MNV treated with anti-VEGF and in their fellow eyes.

Methods: A retrospective longitudinal cohort study. A total of 48 eyes from 24 patients were analyzed: 24 eyes with treatment-naïve type 3 MNV (study eyes) and 24 fellow eyes. Diagnosis was confirmed using baseline fundus fluorescein angiography/indocyanine green angiography, spectral-domain optical coherence tomography, and color fundus photography. All eyes were followed for 36 months. MA incidence was assessed at 6, 12, 24, and 36 months, along with changes in best-corrected visual acuity (BCVA) and central retinal thickness (CRT).

Results: In study eyes, MA was present in five eyes at baseline, increasing to 18 (6 months), 22 (12 months), and 23 (36 months), with a cumulative incidence of 94.7%. The mean BCVA improved from 41.5 ± 18 at baseline to 53.2 ± 19 at 12 months, then declined to 44.6 ± 21 at 36 months. CRT decreased from 554.8 ± 237 µm to 336 ± 171 µm at 12 months, remaining stable thereafter. In fellow eyes, MA progressed from 4 at baseline to 14 at 36 months (50.0%). BCVA declined from 68.8 ± 15 to 57.9 ± 23. CRT showed mild fluctuation. Seven fellow eyes developed new-onset type 3 MNV by 24 months (incidence 29.2%).

Conclusions: MA is a frequent, progressive complication in type 3 MNV with significant visual impact. Fellow eyes face a high risk, highlighting the need for bilateral monitoring, early counseling, and future anti-MA therapies.

Abstract No.: 200461
Bridging the Gap Between Guidelines and Practice: A Knowledge, Attitudes, and Practices (KAP) Study of Diabetic Retinopathy Screening Referral Practices by Filipino Diabetes Care Practitioners

*First Author: Darby **SANTIAGO***
*Co-Author(s): Enrique Luis **FONTANILLA***

Purpose: The objective of the study was to create a validated questionnaire to evaluate the knowledge, attitudes, and practices of general practitioners, internal medicine specialists, and family physicians on diabetic retinopathy screening.

Methods: Previously validated questionnaires were pooled, and relevant statements were constructed to assess knowledge, attitudes, and practices. These were reviewed by content experts for content validity. Statements with a content validity index (CVI) >0.8 were reassessed by the authors for relevance and inclusion. The final statements were used in a pilot questionnaire tested on 37 respondents, including general practitioners, internal medicine specialists, and family physicians. The Kuder-Richardson Test assessed reliability for dichotomous items, while the Cronbach Alpha Test was applied to Likert-scale items.

Results: Twenty-six questions were included in the pilot questionnaire tested on 35 respondents. All statements had a CVI >0.80;

the overall content validity ratio was 0.928. The reliability coefficient was 0.836, based on Kuder-Richardson Formula 20 and Cronbach Alpha.

Conclusions: This validated questionnaire demonstrated that among a small sample of physicians there is a gap in the current awareness regarding the timing of diabetic retinopathy screening, insufficient capacity for screening without referral to an ophthalmologist, a perceived lack of or insufficient access to training and information on diabetic retinopathy screening, and unavailability of resources related to diabetic retinopathy screening such as screeners and facilities.

Abstract No.: 200864
CFAP418 (C8ORF37)–Related Autosomal Recessive Cone-Rod Dystrophy (CORD) With High Myopia: First Report of Three Patients With a Likely Pathogenic 3′ Splice-Site Variant (c.244-1_244del)

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Purpose: To characterize the phenotypic features of CORD associated with a specific genotype of CFAP418 (c.244-1_244del). As per our knowledge, this is the first report on phenotype of three patients with the same genetic variant, c.244-1_244del, in CFAP418.

Methods: Three patients presented to inherited retinal disease (IRD) clinic for phenotypic and genetic evaluation. A detailed history, comprehensive examinations, including visual acuity (VA), clinical examination, retinal imaging, electrophysiology, and genetic testing, were done with whole exome sequencing, using a next-generation sequencing platform. The identified genetic variants were classified according to the American College of Medical Genetics and Genomics (ACMG) guidelines.

Results: All three patients had childhood-onset (6–10 years) central vision blurring, photophobia, and peripheral with night vision loss. The mean VA was 0.8 logMAR (±0.25). High myopia (−12.0 to −17.5 DS), and macular involvement were common. Clinically, myopic changes, attenuated vessels, subtle pigmentary alterations and bony spicule-like pigmentation were observed in Case 1. Optical coherence tomography showed outer retinal loss, foveal thinning, and myopic staphyloma. Fundus autofluorescence revealed minimal macular hyper- to hypo-autofluorescence in Cases 2 and 3. Case1 showed stippled hypo-autofluorescence along arcades and mid-periphery. Electroretinogram showed cone>rod dysfunction in Case 2 and undetectable cone-rod responses in Case 3. Consanguinity was present in Cases1 and 2, with three other affected members. Homozygous 3′ splice-site variant (c.244-1_244del) in CFAP418 was identified with a minor allele frequency of 0.001%. The variant is conserved across species and deleterious.

Conclusions: The 3′ splice-site (c.244-1_244del) variant of CFAP418 caused childhood-onset autosomal recessive CORD with high myopia and macular involvement. No syndromic association was found. Understanding variant specific phenotypes is key to personalized prognostication in the care of IRD.

Abstract No.: 201016
Change of Choroidal Hyperreflective Foci (CHF) in Neovascular Age-Related Macular Degeneration (nAMD) After Brolucizumab and Its Association With Reactivation and Visual Outcomes

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Purpose: To evaluate changes in CHF, differences according to reactivation, and the relationship with visual acuity in treatment-naïve nAMD patients treated with brolucizumab.

Methods: This retrospective study included treatment-naïve nAMD patients who received a brolucizumab loading injection followed by a pro re nata injection regimen over 12 months. Enhanced depth imaging optical coherence tomography scans were analyzed at baseline,

after loading, and at 12 months. CHF were counted within the macular area on both horizontal and vertical one-cut scans centered at the umbo using ImageJ. Differences between reactivation groups were assessed by an independent t-test; changes over time were analyzed using a paired t-test. Associations between CHF count and best-corrected visual acuity (logMAR) were evaluated using Pearson correlation.

Results: CHF count increased after loading compared to baseline (P = 0.023). Patients with reactivation showed higher baseline CHF counts (P = 0.043). There was a positive correlation between logMAR visual acuity at 12 months and CHF counts at baseline, after loading, and 12 months, with the strongest association with after-loading CHF.

Conclusions: In treatment-naive nAMD, lower baseline CHF show more reactivation, and CHF count is positively correlated with decreased visual acuity.

Abstract No.: 200995
Changes in Choroidal Vascular Index (CVI) of Nonaffected Eyes After Anti–Vascular Endothelial Growth Factor (Anti-VEGF) Injection

*First Author: Sumaiya **NASRIN***

Purpose: To evaluate changes in the CVI of unaffected eyes in patients receiving intravitreal anti-VEGF injections for retinal vein occlusion (RVO) with macular edema (ME).

Methods: This prospective, interventional study was conducted at a tertiary hospital in Bangladesh between January 2022 and June 2025. A total of 216 patients with RVO and ME requiring at least three intravitreal anti-VEGF injections in affected eyes were included. Baseline systematic features and optical coherence tomography features, including CVI, were evaluated in both affected and unaffected eyes. CVI of unaffected eyes were measured at baseline (pre-injection) and after three intravitreal anti-VEGF injections in affected eyes.

Results: The study population consisted of 216 patients with a mean age of 66.87 ± 14.84 years. The majority of patients were male (68.06%). The affected eye was the left eye in 57.87% of cases. Bevacizumab was administered in 21.76% of patients, ranibizumab in 41.20%, aflibercept in 17.59%, brolucizumab in 6.02%, and faricimab in 13.43%. The mean baseline CVI in the unaffected eye was 64.89 ± 2.37%. After three anti-VEGF injections in the affected eye, the mean CVI in the unaffected eye was 64.67 ± 2.31%. The P value was 0.3.

Conclusions: In this study, intravitreal anti-VEGF injections in eyes affected by RVO with ME did not result in statistically significant changes in the CVI in the nonaffected eyes, suggesting systemic effects of intravitreal anti-VEGF on choroidal vasculature in the contralateral eye may be limited.

Abstract No.: 201070
Changes in the Incidence of Retinal Artery and Vein Occlusion Pre- and Post-COVID-19: A National Study 2017-2022 in South Korea

*First Author: Jin **CHO***
*Co-Author(s): Yong Joon **KIM***

Purpose: To investigate the incidence of retinal artery occlusion (RAO) and retinal vein occlusion (RVO) during the COVID-19 pandemic compared to pre-pandemic periods in South Korea.

Methods: We analyzed nationwide data from 326,154 patients diagnosed with RAO (n = 32,028), RVO (n = 304,405), or both (n = 10,279) between January 2017 and December 2022. Incidence rate ratios (IRRs) were calculated using 2019 as the reference year. Subgroup analyses were performed by age and sex. We also assessed correlations between monthly RVO incidence and COVID-19 infection or vaccination rates, and compared systemic comorbidities among RVO patients with Bonferroni-adjusted significance.

Results: RAO incidence remained stable across all age and sex groups during the pandemic. In contrast, RVO incidence significantly increased in 2021 and 2022, particularly in individuals

aged 20–39 years (adjusted IRR 1.23 in 2021 and 1.13 in 2022; P < 0.001) and 40–64 years (adjusted IRR 1.12 for both years; P < 0.001). No significant correlations were found between RVO incidence and COVID-19 infection or vaccination. RVO patients in 2021 and 2022 had higher rates of hypertension, diabetes, dyslipidemia, and chronic liver disease (Bonferroni-corrected P < 0.01).

Conclusions: The incidence of RAO did not increase during the COVID-19 outbreak. However, RVO incidence rose notably in 2021–2022, especially among individuals aged 40–64 years, likely reflecting an increased burden of metabolic comorbidities rather than direct effects of COVID-19 infection or vaccination. Further studies are needed to validate these findings.

Abstract No.: 200890
Choroidal Macrovascular Abnormalities Associated with Pathologic Myopia Choroidal Neovascularization (PM-CNV)

*First Author: Zheng **YUPING***
*Co-Author(s): Yao **LIANG**, Wang **NIANJIA***

Purpose: To analyze choroidal hemodynamic alterations and macrovascular abnormalities associated with the development of CNV in PM and the response to anti–vascular endothelial growth factor treatment.

Methods: This retrospective study included 146 PM eyes. Indocyanine green angiography images from arterial filling, venous full-filling, and venous washout phases were registered and superimposed. Use the coregistered images to evaluate the blood flow pattern and the abnormal arteriovenous spatial relationships (crossing, compression, coiling and anastomoses) of choroidal macrovascular.

Results: Eyes were categorized into: single-injection PM-CNV group (n = 50), repeat-injection PM-CNV group (n = 52), and non-CNV PM group (n = 44) served as controls. Compared to non-CNV eyes, PM-CNV eyes exhibited significant choroidal blood flow stasis (P < 0.01) and a higher prevalence of abnormal macrovascular relationships (54% vs. 7%, P < 0.001). While no significant hemodynamic differences existed between repeat- and single-injection CNV groups, abnormal vascular patterns were more frequent in repeat-injection eyes. Notably, arteriovenous (A-V) anastomoses were predominantly observed in the single-injection group.

Conclusions: PM-CNV eyes demonstrate severe choroidal hemodynamic impairment. Extreme choroidal atrophy predisposes large choroidal arteries and veins to crossing, compression, coiling and anastomoses exacerbating local flow disturbances and triggering PM-CNV. A-V anastomoses may represent a form of vascular pattern that facilitates PM-CNV regression.

Abstract No.: 200164
Clinical Characteristics and Comparative Analysis of Responders and Non-responders of Eplerenone in Chronic Central Serous Chorioretinopathy (CSCR)

*First Author: Mohan **RAJAN***
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Purpose: To compare clinical, anatomical, and imaging characteristics of patients with chronic CSCR who responded to oral eplerenone treatment to those who did not, and to identify potential predictive factors for therapeutic response.

Methods: This study is a retrospective observational analysis conducted over a four-year period, from April 2021 to April 2025. The inclusion criteria consisted of patients with CSCR persisting for more than three months and without laserable active leakage observed in fluorescein angiography (FFA). Exclusion criteria included a prior history of treatment with eplerenone, a history of renal disorders, and the presence of other coexisting retinal or ocular pathologies. All patients underwent a comprehensive baseline ocular examination, which included autofluorescence imaging, optical coherence tomography (OCT), OCT angiography, and FFA. Indocyanine green angiography was performed in selected cases. The parameters documented and assessed included baseline visual acuity, laterality,

duration of symptoms, history of steroid usage, and the presence or absence of subretinal fluid (SRF), intraretinal fluid, and pigment epithelial detachment. Additionally, central foveal thickness and choroidal thickness were included in the analysis.

Results: A total of 78 patients with chronic CSCR who met the study criteria during the study period were included. The mean age of the study population was 42 +/- 7 years. 81% were males. The patients were divided into two groups based on the reduction of SRF. More than 50% of reduction in SRF was considered as eprenone responders. The risk factors and ocular factors were documented and analysed. Shorter duration of disease ($P < 0.05$), increased choroidal thickness ($P < 0.01$), absence of choroidal neovascular membrane ($P < 0.05$), and absence of inner retinal fluid ($P < 0.01$) were found to be associated with a good response to oral eplerenone therapy.

Conclusions: Eplerenone still finds its use in selected cases of chronic CSCR. Further prospective studies with a greater sample size may help identify potential responders and tailor treatment.

Abstract No.: 200503
Clinical Indications and Outcomes of Intravitreal Faricimab in Indian Eyes: A Real-world Experience

First Author: ***K** Shreeya **JAIN***
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Purpose: To evaluate patient demographics, clinical indications, and treatment outcomes following intravitreal faricimab injections in Indian patients using electronic medical records.

Methods: This retrospective, hospital-based study analyzed data from January to December 2024, including all patients who received faricimab for either treatment-naïve or refractory retinal diseases. Primary outcomes included baseline demographics, indications for injection, changes in logMAR best-corrected visual acuity (BCVA), and central macular thickness (CMT). Secondary outcomes were the number of injections, injection intervals, and optical coherence tomography biomarker analysis.

Results: The study included 80 eyes of 68 patients (mean age 69 years; 74% male). Major indications were choroidal neovascular membrane (43%), diabetic macular edema (29%), retinal vascular occlusion (16%), polypoidal choroidal vasculopathy (10%), and others (2%). Treatment-naïve eyes accounted for 34%, while common reasons for switching to faricimab included persistent subretinal (24%) or intraretinal fluid (17.5%), recalcitrant DME (20%), and chronic cysts (5%). Faricimab led to a statistically significant improvement in BCVA, with a mean logMAR change of -0.11 ($P = 0.002$), and a mean CMT reduction of 130 microns (from 372.75 ± 227.30 to 242.75 ± 210.39 µm). The Cohen d value of 0.86 indicated a large effect size. Patients received an average of 1.80 ± 0.91 injections over a mean interval of 9.60 ± 5.91 weeks. No adverse events or endophthalmitis were reported.

Conclusions: Faricimab demonstrated favorable anatomical and visual outcomes with good safety and durability, making it a promising treatment option across various retinal pathologies in real-world settings.

Abstract No.: 200723
Clinical Outcomes of Intravitreal Faricimab Injection Among Treatment-Naïve (TN) and Non-Treatment-Naïve (NTN) Patients With Neovascular Age-Related Macular Degeneration (nAMD) and Diabetic Macular Edema (DME)

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Purpose: Faricimab is a bispecific monoclonal antibody targeting vascular endothelial growth factor A and angiopoietin-2. The index study evaluated real-world outcomes following intravitreal faricimab injections (IVFI) in patients treated at a tertiary eye center.

Methods: A retrospective review was conducted on patients with nAMD and DME who received ≥3 consecutive IVFIs. Best-corrected visual acuity (BCVA), central subfield thickness (CST) on optical coherence tomography (OCT), and findings from slit-lamp and funduscopic examinations were analyzed.

Results: In the nAMD cohort (93 patients, 115 eyes; with a mean age of 82.35 years), CST significantly decreased by 16.25 µm ($P < 0.01$), with the greatest reduction seen from baseline to month 6. TN-AMD eyes showed greater CST reduction than NTN-AMD eyes (39.82 µm vs. 17.92 µm, $P < 0.047$). BCVA changes between TN-AMD and NTN-AMD groups were not statistically significant. In the DME cohort (34 patients, 42 eyes; with a mean age of 69.17 years), the overall mean CST reduction was 60.33 µm ($P < 0.01$), with the greatest reduction occurring in the first six months of treatment. There were no significant differences in CST reduction and BCVA when comparing TN-DME and NTN-DME subgroups.

Conclusions: Faricimab significantly reduces CST in both nAMD and DME. Although visual acuity changes were not statistically significant, most demonstrated stable or improved visual acuity. These findings support its efficacy and safety in the management of retinal vascular diseases, although further post-marketing surveillance is needed.

Abstract No.: 200914
Clinical Profile and Associations of Optic Nerve Head Drusens in North Indian Population Presenting at a Tertiary Care Center

First Author: Shristi ***SINHA***
Co-Author(s): Karthik ***MAHESH****, Ramandeep* ***SINGH****, Aastha* ***TAKKAR****, Basavaraj* ***TIGARI***

Purpose: To report the clinical characteristics and presenting features of patients with optic nerve head drusen.

Methods: Patients with optic nerve head drusen presenting to our center between January 2023 and June 2024 were included in our study, and the following baseline investigations were conducted. Visual acuity recorded in logMAR, baseline visual fields (Humphrey visual field [HVF] 30-2 Swedish Interactive Thresholding Algorithm Standard [SITA STD]), A/B scan ultrasonography of the eye, true colour fundus photo, fundus autofluorescence, and swept-source optical coherence tomography passing through the optic disc. Other ocular and systemic associations were also recorded.

Results: During our study period, 20 patients and 38 eyes presented with optic nerve head drusen, of which 14 were male and 6 were female, 18 patients had bilateral disc drusen, and 2 had unilateral. It was an incidental finding during a routine eye examination in three patients, five presented with a decrease in vision, and 12 were referred from neurology, previously been diagnosed as idiopathic intracranial hypertension. Visual field defects were also noted in six patients. One patient had associated choroidal neovascular membrane, one patient had associated retinitis pigmentosa, one patient had associated fundal coloboma type 3, one patient had amblyopia, and in one patient incidental finding of disc drusen was made on noncontrast computed tomography (NCCT) of the orbit with post-traumatic vitreous hemorrhage.

Conclusions: It is necessary to differentiate between pseudo and true disc edema, and optic nerve head drusen should be ruled out before making a definitive diagnosis of papilledema. Disc drusen is a benign condition and can be kept under observation.

Abstract No.: 200652
Clinical Profile of Infants With Treatment-Requiring Retinopathy of Prematurity (ROP): A Retrospective Review in a Level III Government Hospital From 2018 to 2023

First Author: Rachelle ***ANZURES***
Co-Author(s): Janina Faye ***CORCUERA***

Purpose: To present the clinical profile of infants with treatment-requiring ROP who underwent laser indirect ophthalmoscopy (LIO) and/or intravitreal anti–vascular endothelial growth factor (anti-VEGF) injection.

Methods: This study is an interventional case series of patients diagnosed with ROP who underwent treatment with LIO and/or intravitreal anti-VEGF from 2018 to 2023.

Results: This study analyzed 36 infants with treatment-requiring ROP, categorized by ocular intervention: LIO, Anti-VEGF, LIO + Anti-VEGF, and LIO + Vitrectomy. Infants in the LIO + Vitrectomy group were the most premature, while Anti-VEGF-treated infants had slightly better gestational profiles. The LIO + Anti-VEGF group had the lowest birthweights and highest rates of sepsis and transfusion, suggesting more severe disease. Most infants had stable APGAR scores, though some in laser groups scored as low as 0 at one minute. Despite severity, 94.44% were discharged well, underscoring the importance of timely, tailored ocular treatment in ROP.

Conclusions: Treatment-requiring ROP is associated with multiple maternal and neonatal risk factors, including preeclampsia, infection, prematurity, sepsis, and respiratory distress syndrome (RDS). These findings reflect the interplay between pregnancy pathophysiology, retinal vascular development, and neonatal morbidity. While the single-center design limits generalizability, the study provides local evidence for improving ROP management. A comprehensive approach to maternal and neonatal care is crucial to optimizing visual outcomes in high-risk preterm infants.

Abstract No.: 201256
Clinical Significance of Prechoroidal Clefts (PCCs) in Eyes With Exudative Macular Degeneration (eMD): A Retrospective Cohort Study

*First Author: Dhruval **KHURANA***
*Co-Author(s): Yeshwanth **KUMAR**, Anand **RAJENDRAN**, Juhi **SAHU***

Purpose: To evaluate the prevalence, risk factors, and clinical implications of PCCs in Indian patients with eMD, and to assess their response to anti–vascular endothelial growth factor (anti-VEGF) therapy.

Methods: This retrospective cohort study included 215 eyes diagnosed with eMD between January 2023 and January 2024 with a minimum follow-up of six months. Patients were categorized based on the presence or absence of PCC on spectral-domain optical coherence tomography (OCT). Baseline and follow-up data were collected on demographics, best-corrected visual acuity (BCVA), anatomical OCT biomarkers, and treatment details. Statistical analyses were performed to compare outcomes between groups.

Results: Prechoroidal clefts were identified in 21 eyes (10.23%). The mean time to PCC appearance was 12 months post-diagnosis. Eyes with PCC demonstrated significantly worse BCVA at three and six months, and final follow-up ($P < 0.05$). Anatomically, PCC eyes showed increased central subfield thickness, greater maximal retinal thickness, and more intraretinal fluid at six months ($P < 0.01$). PCC was associated with persistent subretinal fluid in 61.9% of cases versus 42.9% in noncleft eyes. A significantly higher number of anti-VEGF injections were administered in the PCC group (mean 7.86 vs. 5.95; $P > 0.05$). Only 23.8% of PCCs resolved with treatment, and all cases with persistent clefts at the final visit had active choroidal neovascular membrane.

Conclusions: PCCs were associated with increased disease activity, suboptimal visual outcomes, and higher treatment burden. Their presence may signify a recalcitrant neovascular phenotype, necessitating more aggressive and sustained therapy.

Abstract No.: 200406
Comparative Analysis of Geographic Atrophy (GA) Progression Over a Year in East Asian Population Versus South and Southeast Asians

*First Author: Chui Ming Gemmy **CHEUNG***
*Co-Author(s): Zhang **CHENXI**, Lisa Maria **GEORGE**, Noa **GILEAD GILHAR**, Kelvin **Y.c. TEO***

Purpose: GA, a global cause of irreversible vision loss, exhibits slower rate of growth in Asians than non-Asians. Data on subethnic

Asian groups on imaging features and progression remain limited. This study focuses on comparing the progression of GA in East Asians versus South and Southeast Asians.

Methods: In this single-center, prospective, longitudinal study, patients over 50 years with GA secondary to age-related macular degeneration were assessed at baseline and 12 months using fundus autofluorescence and spectral-domain optical coherence tomography. Patients were classified as East Asian (EA; Chinese) or Southeast/South Asian (SE/S; Malay/Indian) descent.

Results: A total of 115 patients (142 eyes) included, with 88% EAs and 12% SE/S Asians. Age and gender were similar between EAs and SE/S with the mean age of 79 ± 7 years, 61% females and 80.6 ± 7.1 years, 57% females, respectively. EAs had 21% of cohort with history of smoking while SE/S had 14%. Bilaterality was seen in 21% in EAs (21 patients) and 43% in SE/S Asians (6 patients; P = 0.06). Multifocality was comparable with 51% of EA eyes (62) and 55% of SE/S eyes (11; P = 0.72). GA progression over one year was not statistically significant between groups with 1.05 mm^2/year in EAs versus 0.70 mm^2/year in SE/S (P = 0.524); square root–transformed values were 0.90 mm/year and 0.84 mm/year, respectively (P = 0.95).

Conclusions: GA progresses more slowly in Asians. Deeper insights into GA subphenotypes are essential for personalized treatment strategies.

Abstract No.: 200967
Comparative Efficacy of Faricimab for the Treatment of Diabetic Macular Edema (DME) at One and Two Years: A Systematic Literature Review and Network Meta-Analysis

*First Author: Wing **CHUNG***
*Co-Author(s): Don **LEE***

Purpose: Faricimab, a dual angiopoetin-2/vascular endothelial growth factor A (VEGFA) bispecific antibody, improves disease control and extends treatment durability in DME. This systematic literature review and Bayesian network meta-analysis (NMA) of randomized controlled trials (RCTs) compared the efficacy and safety of faricimab per a personalized treat-and-extend (T&E) regimen (every four weeks [Q4W]–Q16W) with other DME therapies.

Methods: Faricimab (6 mg T&E/Q8W) data from YOSEMITE (NCT03622580) / RHINE (NCT03622593) RCTs were used. Comparators included aflibercept 2 mg Q4W/Q8W/pro re nata (PRN), aflibercept 8 mg Q12W/Q16W, bevacizumab 1.25 mg PRN, brolucizumab 6 mg Q4W/Q12W, ranibizumab 0.3/0.5 mg T&E/PRN/Q4W, dexamethasone 0.7 mg PRN, and laser photocoagulation PRN. Outcomes were change in best-corrected visual acuity (BCVA), Early Treatment Diabetic Retinopathy Study (ETDRS) letters, and central subfield thickness (CST) through 12 and 24 months, and ≥15 ETDRS letter gainers and ≥1 ocular adverse events (AEs) at 12 months.

Results: The NMA included 24 RCTs. Faricimab T&E showed comparable/favorable mean BCVA and CST change through 12 months versus aflibercept 8 mg Q12W and Q16W (mean differences [95% credible interval, CrI]: -1.1 [-4.0,1.7], -1.9 [-4.8,1.0] ETDRS letters; and 32.6 [0.8,64.3], 39.7 [7.2,71.6] µm, respectively). Similar results were observed through 24 months. Aflibercept 8 mg Q16W had lower (odds ratio [OR] [95% CrI]: 0.35 [0.16,0.75]), while other anti-VEGF treatments had similar ≥15 ETDRS letter gainers at 12 months versus faricimab T&E. Occurrence of ≥1 ocular AEs at 12 months was similar for all treatments versus faricimab T&E except bevacizumab (OR [95% CrI]: 4.4 [1.6,13.0]) and dexamethasone (4.2 [2.3,7.8]).

Conclusions: These data highlight faricimab's (T&E up to Q16W) potential to provide greater and durable DME disease control versus anti-VEGF alone.

Abstract No.: 200388
Comparative Efficacy of Faricimab for the Treatment of Diabetic Macular Edema (DME) at One and Two Years: A Systematic Literature Review and Network Meta-Analysis (NMA)

*First Author: Florie **MAR***
*Co-Author(s): Mark **BARAKAT**, Christian **BUEHRER**, Oliver **COX**, Kara **GIBSON**, Nancy **HOLEKAMP**, Jakob **SIEDLECKI**, Colin **TAN***

Purpose: Faricimab, a dual angiopoetin-2/vascular endothelial growth factor A (VEGF-A) bispecific antibody, improves disease control and extends treatment durability in DME. This systematic literature review and Bayesian NMA of randomized controlled trials (RCTs) compared the efficacy and safety of faricimab per a personalized treat-and-extend (T&E) regimen (every four weeks [Q4W]–Q16W) with other DME therapies.

Methods: Faricimab (6 mg T&E/Q8W) data from YOSEMITE [NCT03622580] / RHINE [NCT03622593] RCTs were used. Comparators included aflibercept 2 mg Q4W/Q8W/pro re nata (PRN), aflibercept 8 mg Q12W/Q16W, bevacizumab 1.25 mg PRN, brolucizumab 6 mg Q4W/Q12W, ranibizumab 0.3/0.5 mg T&E/PRN/Q4W, dexamethasone 0.7 mg PRN, and laser photocoagulation PRN. Outcomes were change in best-corrected visual acuity (BCVA), Early Treatment Diabetic Retinopathy Study] (ETDRS) letters, and central subfield thickness (CST) through 12 and 24 months, as well as ≥15 ETDRS letter gainers and ≥1 ocular adverse events (AEs) at 12 months.

Results: The NMA included 24 RCTs. Faricimab T&E showed comparable/favorable mean BCVA and CST change through 12 months versus aflibercept 8 mg Q12W and Q16W (mean differences [95% credible interval, CrI]: -1.1 [-4.0,1.7]; -1.9 [-4.8,1.0] ETDRS letters; and 32.6 [0.8,64.3], 39.7 [7.2,71.6] µm, respectively). Similar results were observed through 24 months. Aflibercept 8 mg Q16W had lower (OR [odds ratio] [95% CrI]: 0.35 [0.16,0.75]), while other anti-VEGF treatments had similar ≥15 ETDRS letter gainers at 12 months versus faricimab T&E. Occurrence of ≥1 ocular AEs at 12 months was similar for all treatments versus faricimab T&E, except bevacizumab (OR [95% CrI]: 4.4 [1.6, 13.0) and dexamethasone (4.2 [2.3, 7.8]).

Conclusions: These data highlight faricimab's (T&E up to Q16W) potential to provide greater and durable DME disease control versus anti-VEGF alone.

Abstract No.: 201123
Doxycycline in Rickettsial Retinitis: As the First Line of Management

*First Author: Samiksha **SUNIL KUMAR***
*Co-Author(s): Namita C. **ANAGOL**, Pratiksha **SUNIL KUMAR***

Purpose: To evaluate the role of oral doxycycline as the first line therapy for rickettsial retinitis.

Methods: A non-randomized, retrospective study case study. Suspected cases of retinitis evaluated and five cases included which were suspected as rickettsios. Patients subjected to Imaging as required and blood test to assess the cause of retinitis. Presented with fever in the past two to four weeks. Most hailed from rural areas while one patient was from urban area with recent history of travel. Three bilateral cases and three were males. Patients received topical steroids and oral doxycycline 100 mg twice daily for 10-14 days. Investigations revealed five case positive for Weil–Felix test (WFT). No systemic steroids were included in their treatment regimen.

Results: The value of the WFT has been demonstrated in Indian studies. In a study from India, WFT titers greater than 1:160 for OX K and greater than 1:80 for OX 2 and OX 19 are considered significant. Optical coherence tomography (OCT) can demonstrate inner retinal involvement in epidemic retinitis, including rickettsial retinitis, and can help differentiate types of retinitis. Therefore, OCT should be performed in all cases of retinitis. Larger randomized controlled studies are needed to compare the speed of recovery with systemic steroids alone versus a combination of topical steroids and antibiotics.

Conclusions: Rickettsial retinitis has good visual outcome if treated early. Those on empirical treatment based on the clinical presentation till the confirmation of serological diagnosis. Indian tick typhus to be the most common organism. Four had good visual recovery, one case showing poor prognosis due to macular ischemia. Monotherapy with tablet doxycycline can be a good treatment option for rickettsial retinitis instead of systemic steroids which can have serious side effects.

Abstract No.: 201267
Early Post-Natal Weight Gain, Hemoglobin Levels, and Oxygen Saturation as Predictors of Progression of Retinopathy of Prematurity (ROP): A Retrospective Cohort Study in Filipino Preterm Infants in a Tertiary Hospital

First Author: John Michael ***MENDOZA***
Co-Author(s): Ronnie ***MANAYSAY***

Purpose: To determine the prognostic characteristics of early post-natal weight gain, serum hemoglobin levels, and oxygen saturation in predicting the progression of type 1 ROP.

Methods: The study included preterm infants from 2017 to 2019 at the University of Santo Tomas Hospital Manila. Data gathered from the first ROP screening and subsequent examinations every two weeks until one month follow-up, totalling three ROP examinations with staging recorded accordingly. Weight in grams, weekly serum hemoglobin levels, and average oxygen saturation were recorded after every screening.

Results: A total of 77 subjects were included in the study. The mean age was 31.9 ± 2.5 weeks. Having a post-natal weight gain of less than 0.625 kg predicts ROP progression with 37.5% sensitivity, 88.4% specificity, and 83.1% accuracy. Having a serum hemoglobin level below 126 predicts ROP progression with 80.0% sensitivity, 78.1% specificity, and 78.4% accuracy. Finally, having oxygen saturation below 97.5% predicts ROP progression with 80.0% sensitivity, 7.3% specificity, and 15.2% accuracy.

Conclusions: The risk for ROP progression decreases by 5% for every one kg increase in post-natal weight gain. The identified optimum cut-off value for post-natal weight gain in predicting ROP progression was below 0.625 kg. Although it demonstrated acceptable accuracy (83.1%) and high specificity (88.4%), its sensitivity is low (37.5%). Serum hemoglobin and oxygen saturation were not seen to be significantly associated with ROP progression, and they have low accuracy (78.4% and 15.2%, respectively).

Abstract No.: 200567
Effect of Glaucoma Medications on Transient Intraocular Pressure (IOP) Elevation Among Nonglaucomatous Patients Receiving Intravitreal Bevacizumab Injection in a Tertiary Government Hospital in the Philippines

First Author: Eleonore ***IGUBAN***
Co-Author(s): Tathiana ***MARCELO***

Purpose: This study aims to determine the effect of prophylactic IOP-lowering medications among nonglaucomatous patients receiving intravitreal bevacizumab injection in a tertiary government hospital in the Philippines.

Methods: This is a single-center, prospective, single-masked, randomized study of 20 patients (24 eyes) who received the first dose of intravitreal bevacizumab injection. Patients were randomly assigned to four groups (group 1: control/topical lubricant; group 2: timolol maleate 0.5% eye drops; group 3: brimonidine tartrate 0.2% eye drops, and group 4: fixed combination brimonidine tartrate 0.2% + timolol maleate 0.5% eye drops). The IOP was measured using a Goldmann Applanation tonometer at baseline; 5, 15, 30, 45 and 60 minutes after injection.

Results: The result shows that there was a significant increase in IOP across all four groups at five minutes after the intravitreal injection. The control group that was given artificial tears as a placebo had a significant IOP spike post-injection, but eventually reached normal IOP range between 15 to 60 minutes

post-injection. Brimonidine tartrate 0.2% and tartrate prevented a significant IOP spike after intravitreal bevacizumab injection. Timolol maleate 0.5% prevented an increase in the IOP post-injection, but the IOP-lowering effect was not statistically significant. Fixed combination brimonidine tartrate 0.2% + timolol maleate 0.5% produced the highest lowering effect among all four groups.

Conclusions: Immediate transient increase in IOP is a common occurrence post–intravitreal injection of bevacizumab. All anti-glaucoma drops used in this study prevented significant IOP spikes at all time periods when applied two hours before intravitreal anti–vascular endothelial growth factor injection.

Abstract No.: 200261
Efficacy and Safety of Half-Dose/Fluence Photodynamic Therapy (PDT) Versus Standard and Two-Thirds Regimens in Central Serous Chorioretinopathy (CSC): One-Year Results of a Multicenter Study

First Author: Akiko ***MIKI***
Co-Author(s): Hisashi ***FUKUYAMA****, Gomi* ***FUMI****, Ryoh* ***FUNATSU****, Eisuke* ***IKEUCHI****, Ayame* ***IMAI****, Hiroki* ***IMATSUJI****, Masaya* ***ITO****, Naohisa* ***MIHARA****, Shoki* ***MIYAKE****, Makoto* ***NAKAMURA****, Toshiki* ***OKA****, Koki* ***OKAMURA****, Takato* ***SAKONO****, Hideki* ***SHIIHARA****, Shozo* ***SONODA****, Hiroto* ***TERASAKI***

Purpose: To determine the optimal PDT regimen for CSC, leveraging a large-scale, multicenter cohort.

Methods: We retrospectively collected data from 687 eyes with CSC who underwent PDT at three hospitals in Japan between 2013 and 2024, resulting in a cohort 2.6 times larger than in previous studies. Of these, we included 502 CSC eyes without macular neovascularization or prior PDT. We compared the effectiveness of half-dose/fluence PDT versus standard or two-thirds-dose/fluence PDT in CSC using a generalized linear mixed model after adjusting for baseline characteristics with two propensity score (PS) methods (PS matching and analysis including PS as a covariate).

Results: PS matching achieved absolute standardized mean differences of <0.1 for all 18 baseline characteristics, including patient demographics, best-corrected visual acuity (BCVA), disease duration, and imaging findings (optical coherence tomography, angiography, fundus autofluorescence). We found that standard PDT demonstrated a significantly greater effect on choroidal thinning than half-dose/fluence PDT throughout the 12-month follow-up period (matching: $\beta = -54.75$, $P = 0.006$; as a covariate: $\beta = -55.23$, $P = 0.002$). Moreover, although standard PDT showed significantly higher short-term effectiveness in resolving serous retinal detachment (SRD) compared to half-dose/fluence PDT (3-month; matching: $P = 0.002$; as a covariate: $P = 0.037$), BCVA at the same time was worse in the standard PDT group (matching: $P = 0.023$; as a covariate: $P = 0.020$). No significant differences were observed among the regimens regarding final BCVA, SRD, or complications.

Conclusions: Our findings do not support the preferential use of higher-dose/fluence PDT over half-dose/fluence PDT for CSC.

Abstract No.: 200808
Efficacy of Subthreshold Micropulse Diode Laser (SMDL) in Diabetic Macular Edema (DME): A Prospective Study From Bangladesh

First Author: Md.Mominul ***ISLAM***
Co-Author(s): Omar ***JAFARULLAH****, Mostafizur* ***RAHMAN****, Saima Sobhan* ***SHUCHI***

Purpose: To assess the efficacy of SMDL therapy in improving visual acuity and reducing central macular thickness (CMT) in patients with DME.

Methods: This prospective interventional study included 74 patients with DME who underwent SMDL therapy. Best-corrected visual acuity (BCVA) using logarithm of the minimum angle of resolution (logMAR) and CMT measured by optical coherence tomography were recorded at baseline, one month, and three months after treatment. All procedures were performed using a 577-nanometer wavelength laser in subliminal mode. Statistical analysis was conducted using SPSS software.

Results: The mean baseline BCVA was 0.67 ± 0.28 logMAR, which improved to 0.57 ± 0.25 at one month and 0.52 ± 0.28 at three months (P = 0.001). The mean baseline CMT was 339 ± 66.63 µm, which reduced to 313 ± 58.29 µm at one month and 304 ± 57.56 µm at three months (P = 0.001). Only six patients showed increased CMT, and two patients experienced mild visual decline. No visible retinal damage or adverse events related to laser treatment were observed.

Conclusions: SMDL therapy demonstrates significant improvement in both functional (visual acuity) and anatomical (CMT) outcomes in DME patients, with minimal adverse effects. This modality may offer a safer, less invasive alternative to conventional therapies while reducing treatment burden.

Abstract No.: 200984
Eplerenone in the Treatment of Bullous Variant of Central Serous Chorioretinopathy (bCSCR)

First Author: Vignesh ***THOGULUVA PRABHAKARAN***

Purpose: To study the efficacy of eplerenone in the treatment of bCSCR.

Methods: A retrospective interventional case series in a tertiary eye care center. Eight eyes of 8 patients with bCSCR, who were treated with oral eplerenone 25 mg once daily and had a follow-up of at least three months were included, and the data were analyzed to study the efficacy of eplerenone in the resolution of bCSCR.

Results: All the patients were males. All the patients had complete resolution of macular and inferior bullous retinal detachment; two eyes had complete resolution at the second-month follow-up, three eyes had complete resolution at the third-month follow-up, one eye at the fourth-month follow-up, one eye at the fifth-month follow-up, and one eye at the sixth-month follow-up. Visual acuity improved in four eyes, remained stable in two eyes and worsened in one eye.

Conclusions: Eplerenone has been used in the treatment of bCSCR, before in two cases, one case had multifocal CSCR with low serum cortisol, and another case had bCSCR with giant retinal pigment epithelium macrorip. Eplerenone was used along with photodynamic therapy in one eye and laser photocoagulation in the other eye of the same patient in another case report, with good results. In the study, eplerenone treatment resulted in complete resolution of bCSCR in all eight patients. This is the first case series to show the efficacy of eplerenone in the treatment of bCSCR. A larger study with a longer follow-up is warranted.

Abstract No.: 201053
Eplerenone in the Treatment of Chronic Central Serous Chorioretinopathy (cCSC) With Posterior Cystoid Retinal Degeneration (PCRD)

First Author: Vignesh ***THOGULUVA PRABHAKARAN***

Purpose: To study the efficacy of eplerenone in the treatment of cCSC with PCRD.

Methods: It is a retrospective interventional case series. At baseline, every subject had undergone visual acuity assessment, complete anterior and posterior segment examination, spectral-domain optical coherence tomography (SDOCT), and fundus fluorescein angiography (FFA). At every follow-up visit, subjects underwent visual acuity assessment, complete anterior and posterior segment examination, and SDOCT. Central macular thickness and subretinal fluid level (SRF) were recorded at each visit. Eplerenone 50 mg was started in these subjects.

Results: A total of 12 eyes of 8 patients were found to have cCSC with PCRD, with a male predominance (7 males, 1 female). The mean duration between cCSC diagnosis and onset of PCRD was 18 months. Four cases had bilateral PCRD (8 eyes). The mean best-corrected visual acuity (BCVA) at diagnosis of PCRD was 0.45 ± 0.38 logMAR (range: 0-1.3), reducing to 0.57 ± 0.50 logMAR (range: 0-1.78) at the final follow-up (P = 0.115). At the final follow-up, SRF had

resolved completely in seven eyes (58%). PCRD had reduced in 75% of cases, while complete resolution of PCRD was noted in six eyes (50%). However, the final BCVA outcome did not differ significantly compared to baseline (P = 0.201).

Conclusions: Oral eplerenone therapy can be considered a viable option for cases of cCSC with PCRD and timely administration of this therapy can result in anatomic resolution and prevent further deterioration of vision.

Abstract No.: 201003
Ethnic Variations in Neovascular Age-Related Macular Degeneration (nAMD): Optical Coherence Tomography (OCT)–Based Subtype Analysis Across Singaporean, Canadian Asian, and Canadian Caucasian Populations

*First Author: Gemmy **CHEUNG***
*Co-Author(s): Lisa **GEORGE**, Noa **GILEAD**, Antoine **HUANG**, Zehua **JIANG**, Wataru **KIKUSHIMA**, Waiching **LAM**, Jennifer **LING**, Mohamed **SHERIF**, Kelvin **TEO**, Chenxi **ZHANG***

Purpose: To compare the prevalence and OCT characteristics of nAMD subtypes among Singaporean Asians and Caucasians. Further, to evaluate the potential influence of environmental factors, we compared Singaporean Asians with Asians residing in Canada.

Methods: This retrospective, multicenter study analyzed consecutive treatment-naïve nAMD patients from Singapore and Canada. Patients were stratified into three groups: Singaporean (n = 181), Canadian Caucasian (n = 89), and Canadian Asian (n = 57). Polypoidal choroidal vasculopathy (PCV) diagnosis was based on modified Asia-Pacific Ocular Imaging Society non-indocyanine green angiography criteria. OCT features, including pigment epithelial detachments (PED), drusen types, and choroidal thickness, were systematically analyzed.

Results: PCV prevalence differed significantly across groups: Singaporean 42.0%, Canadian Asian 43.9%, and Canadian Caucasian 16.9%. Singaporean patients were younger (70 ± 8.9 years) with higher male predominance (66.9%) compared to Canadian Caucasian (80 ± 9.3 years, 37.1% male) and Canadian Asian patients (77 ± 10.3 years, 50.9% male). Among PCV cases, sharp-peaked PED was most frequent in Canadian Asian patients (96.0% vs. 75.0% Singaporean, 80.0% Canadian Caucasian). Extensive subretinal hemorrhage was highest in Canadian Asian PCV patients (20.0%). Soft drusen prevalence in PCV was greater in Canadian Caucasian (20.0%) compared to Asian populations (4.0-6.6%). Reticular pseudodrusen were more common in Canadian Caucasian typical nAMD patients (37.8%).

Conclusions: Significant ethnic variations exist in nAMD subtype prevalence and morphological characteristics, with Asian populations demonstrating higher PCV rates and distinct OCT features compared to Caucasians. Clinical characteristics of Asians residing in Singapore and Canada were largely similar.

Abstract No.: 200843
Evaluating a Multimodal Imaging–Based Retina Observation Clinic (ROC): Performance and Agreement Between Trained Technicians and Specialists

*First Author: Gavin **TAN***
*Co-Author(s): Rose Ann **GOH**, Amalia Binte **JUHARI**, Lin Jun **LEE**, Fang **ZHENG***

Purpose: To evaluate the performance of the ROC in managing stable retinal conditions and assess the agreement between trained ophthalmic technicians and retinal specialists in identifying diseases requiring treatment.

Methods: ROC is a new care model where technicians review visual acuity, intraocular pressure, widefield fundus images, and optical coherence tomography scans, and provide preliminary management plans. Urgent cases are referred immediately to the retinal specialists; nonurgent cases are finalized by specialists within four weeks. ROC consult records (January 2023–October 2024) and service data (January 2023–December 2024) were analyzed. Outcomes included the number of patients initially deemed stable who later required unexpected retina-related treatments (intravitreal injections, retina laser, or

vitrectomy), and the proportion of referrals that received interventions. Technician-specialist agreement was assessed based on referral concordance within three months.

Results: A total of 5901 visits from 4177 patients were reviewed: 2340 had diabetic retinopathy (DR), 2162 had age-related macular degeneration (AMD), 419 had both DR and AMD, and 1818 had other retinal conditions. ROC referred 857 visits to the retina clinic; 5044 visits were deemed stable. Among referrals, 125 (14.6%) received retina-related treatments. Of the stable group, only 11 (0.22%) required unplanned interventions before their next scheduled visits. Technician assessments had 81.8% sensitivity and 98.0% specificity, compared with the specialist outcome as the gold standard.

Conclusions: ROC effectively identifies most retinal diseases requiring treatment. Technician-led triage offers high specificity, though further improvements may enhance sensitivity and reduce clinician burden.

Abstract No.: 201095
Evaluation of Multimodal Imaging Biomarkers in Diabetic Macular Edema (DME) After Faricimab Therapy

*First Author: Jaehwan **CHOI***
*Co-Author(s): Jiyong **KIM**, Kiyoung **KIM**, Seung-young **YU***

Purpose: This study aimed to evaluate imaging biomarkers using optical coherence tomography (OCT), swept-source OCT angiography (SSOCTA) in Korean patients with DME treated with intravitreal faricimab. The primary objective was to compare anatomical and vascular features between eyes with and without recurrence during real-world clinical follow-up.

Methods: In this retrospective review, 22 DME patients treated with intravitreal faricimab and monitored for at least one year were included. Best-corrected visual acuity and OCT parameters including hyperreflective foci (HRF), central subfield thickness (CST), and choroidal vascularity index (CVI) were assessed. Intraretinal microvascular abnormalities (IRMA) and their regression were evaluated with SSOCTA. Patients were divided into recurrence (n = 10) or non-recurrence (n = 12) groups based on the need for additional injections due to fluid reaccumulation or CST increase. Imaging outcomes at 3, 6 and 12 months were compared.

Results: The recurrence group displayed a significantly lower complete IRMA regression rate at 6 months (0.075 ± 0.169 vs. 0.340 ± 0.341, $P < 0.05$) and higher HRF counts at 6 months (52.1 ± 12.4 vs. 39.5 ± 11.3, $P < 0.05$) and 12 months (45.5 ± 8.6 vs. 34.1 ± 11.9, $P < 0.05$) compared to the non-recurrence group. No significant differences were found in CST and CVI.

Conclusions: Lower complete IRMA regression rate at 6 months and elevated HRF counts at 6 and 12 months are associated with recurrence after faricimab treatment in DME. These imaging biomarkers may aid in identifying eyes at higher risk of recurrence and support personalized treatment approaches using multimodal imaging.

Abstract No.: 200558
Faricimab Is Associated With Lower Rates of Subretinal Fibrosis and Macular Atrophy and Higher Rates of Intraocular Inflammation in Neovascular Age-Related Macular Degeneration (nAMD): Real-World Evidence From the Fight Retinal Blindness! (FRB!) Treatment Outcomes Registry

*First Author: Yohei **HASHIMOTO***
*Co-Author(s): Mark **GILLIES***

Purpose: Faricimab, a bispecific antibody targeting vascular endothelial growth factor A (VEGFA) and angiopoietin-2 (Ang-2), has emerged as a novel treatment for nAMD. This study evaluates real-world outcomes associated with faricimab for nAMD, focusing on anatomical and inflammatory endpoints, using high-quality observational data from Europe and Australasia.

Methods: We analyzed real-world outcomes from data contributed by clinics across both

regions participating in the FRB! project. We compared rates of subretinal fibrosis, macular atrophy and intraocular inflammation in patients with nAMD receiving faricimab with patients treated with first-generation VEGF inhibitors.

Results: Faricimab was associated with significantly lower 12-month rates of subretinal fibrosis and macular atrophy compared with first-generation VEGF inhibitors, suggesting a possible protective effect on the outer retina and retinal pigment epithelium. However, a small but significantly higher rate of intraocular inflammation was also observed, warranting further investigation into underlying immunological mechanisms and optimal monitoring strategies.

Conclusions: These findings from real-world practice support the clinical benefits of faricimab in reducing irreversible structural damage of the outer retina in nAMD, while also highlighting the need for vigilance regarding inflammatory side effects. The data foreshadow the potential for patient-based precision in therapeutic approaches for nAMD.

Abstract No.: 200102
First Genetically Confirmed Case of Autosomal Recessive Bestrophinopahy (ARB) in the Philippines: A Sibling Case Study

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*Co-Author(s): Kristine **CORPUS-VELASQUEZ**, Raphael **GUMAFELIX***

Purpose: To highlight the phenotypic heterogeneity of BEST1-related disorders by presenting the clinical features and imaging findings of Filipino siblings who share the same pathogenic bi-allelic mutation but manifest with distinct clinical presentations. Furthermore, it documents the first genetically confirmed case of ARB in the Philippines.

Methods: Two Filipino siblings, a 26-year-old female and a 24-year-old male, presented for refractive surgery screening, both reporting progressive, painless bilateral visual blurring. A comprehensive ophthalmic evaluation, multimodal imaging, and genetic testing were performed.

Results: Refraction revealed myopia in the sister (BCVA 20/20) and hyperopia in the brother (BCVA 20/25). Anterior segment examination was unremarkable for both. Fundus examination showed symmetrical yellow placoid lesions and spotty patches in the posterior pole. The sister had white-gray subretinal scars sparing the fovea, which were absent in the brother. Fluorescein angiography demonstrated symmetrical, ill-defined granular hyperfluorescence without choroidal neovascularization. Macular OCT revealed focal ellipsoid zone thickening with minimal subretinal fluid in the sister, while the brother had larger subretinal fluid accumulation. Genetic testing identified two mutations in the BEST1 gene: c.584C>T (p.Ala195Val) and c.508C>T (p.Gln170*), the latter being a novel disease-causing mutation. After one year of follow-up, no significant changes in clinical or imaging findings were observed in either sibling.

Conclusions: This case demonstrated the clinical variability of ARB, with siblings presenting distinct phenotypes despite identical bi-allelic mutations. Genetic testing was essential for diagnosis, and the stability of findings over one year suggested a relatively stable course.

Abstract No.: 200338
Heme Metabolism in Macrophages Promotes Retinal Neovascularization (RNV)

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Purpose: To investigate how hemorrhage-released heme promotes RNV via macrophage heme oxygenase-1 (HMOX1) metabolism.

Methods: An oxygen-induced retinopathy (OIR) model was established using C57BL/6 mice. Pathological differences between hemorrhage and non-hemorrhage groups were compared via retinal immunofluorescence staining. Coagulation factor VIII-deficient (F8 mutant) hemophilic mice were used to simulate a hemorrhagic environment. Myeloid-specific HMOX1 knockout mice and their wild-type (WT)

littermates on an F8 homozygous background were generated and subjected to OIR. In vitro, macrophages isolated from HMOX1 knockout or WT mice were cocultured with endothelial cells to assess their impact on endothelial cell function. Additionally, macrophages stimulated with heme underwent ribonucleic acid (RNA) sequencing to identify key metabolic regulatory targets.

Results: In the OIR model, the hemorrhage group exhibited a significant increase in RNV. F8 homozygous mice demonstrated more pronounced RNV formation, compared to heterozygotes. Myeloid-specific HMOX1 knockout effectively suppressed RNV development. In vitro, coculture with HMOX1 knockout macrophages significantly inhibited endothelial cell proliferation, migration, and sprouting, compared to coculture with WT macrophages. Experiments demonstrated that heme induces metabolic reprogramming in macrophages, upregulating HMOX1 expression. This was associated with significant upregulation of key glycolytic enzymes lactate dehydrogenase A (LDHA) and pyruvate kinase (PKM), alongside increased histone lactylation modification levels (most prominently H3K14la). Chromatin immunoprecipitation quantitative PCR (ChIP-qPCR) confirmed direct binding of H3K14la modification to the regulatory region of the HMOX1 gene.

Conclusions: Hemorrhage-derived heme drives RNV by upregulating HMOX1 through glycolysis-mediated histone lactylation in macrophages, suggesting novel therapeutic targets.

Abstract No.: 200781
Hyperreflective Cystoid Diabetic Maculopathy: Patient Profile and Treatment Response

*First Author: Apoorva **JADHAV***

Purpose: To study the clinical profile of patients with hyperreflective cystoid diabetic maculopathy and their treatment response over one year of follow-up, and to evaluate the mean change in best-corrected visual acuity (BCVA), central retinal thickness and role of other biomarkers on optical coherence tomography (OCT), and the treatment efficacy of both anti–vascular endothelial growth factor (anti-VEGF) and intravitreal dexamethasone implants in management of hyperreflective cystoid diabetic maculopathy following treatment over one year of follow-up.

Methods: This was a prospective observational study involving 64 eyes of 49 patients with hyperreflective cystoid diabetic macular edema (DME). Patients diagnosed with non-tractional cystoid DME who were willing to follow up for a minimum of one year and had OCT scans during multiple retinal clinic visits were included in the study.

Results: Both treatments significantly improved BCVA (Ozurdex: $P < 0.001$; anti-VEGF: $P = 0.002$) and significantly reduced the central foveal thickness (CFT). There was a difference in the size of the foveal avascular zone (FAZ) between the superficial capillary plexus (SCP) and the deep capillary plexus (DCP), which was statistically significant; the DCP FAZ was larger than the SCP FAZ in both anti-VEGF and Ozurdex-treated eyes (both groups: $P < 0.001$). On follow-up, suspended scattering particles in motion (SSPiM) were reduced, with a greater reduction observed in the anti-VEGF group.

Conclusions: Hyperreflective cystoid DME responds equally to both anti-VEGF and dexamethasone. This study highlights the beneficial role of steroids as fewer injections are required to manage these eyes, leading to better patient compliance and less financial burden to the patient.

Abstract No.: 201200
I Just Wanted Water: Valsalva Retinopathy in a Young Woman With Type 1 Diabetes Mellitus Following Heavy Lifting

*First Author: David Francis **CHAN***
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Purpose: To highlight Valsalva retinopathy as an important differential diagnosis in diabetic patients presenting with sudden vision loss, particularly following physical exertion. This

aims to emphasize the diagnostic challenges this condition may pose, the importance of thorough history taking, and the need to distinguish it from diabetic retinopathy-related hemorrhages to ensure appropriate management and prognosis.

Methods: To present a case of a 29-year-old Filipina with a 17-year history of type 1 diabetes and dyslipidemia, previously treated with panretinal photocoagulation for proliferative diabetic retinopathy, experienced acute painless blurring of vision in her right eye (5/200 best-corrected visual acuity [BCVA]) after lifting a 10L water container. Fundus examination revealed a well-defined, boat-shaped preretinal hemorrhage in the lower third of the macula and a 1-disc area hemorrhage over the fovea with trailing vitreous hemorrhage temporal to the macula crossing over the mentioned preretinal hemorrhage, consistent with Valsalva retinopathy. Optical coherence tomography confirmed the presence of preretinal and vitreous hemorrhage.

Results: Conservative management led to spontaneous resolution within four weeks, with near-complete visual recovery (20/70 BCVA).

Conclusions: Valsalva retinopathy should be included in the differential diagnosis of sudden vision loss in diabetic patients following exertional strain. Prompt ophthalmologic referral and detailed history-taking are vital to distinguish it from diabetic complications and to guide appropriate care.

Abstract No.: 201212
IL-3Rα–STAT5B Signaling Drives M2 Macrophage Polarization and Choroidal Neovascularization (CNV)

*First Author: Xiaoling **LIANG***
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Purpose: To define how IL-3/IL-3Rα signaling regulates macrophage polarization and promotes pathological angiogenesis in CNV, with a focus on STAT5B phosphorylation.

Methods: Human vitreous and fibrovascular membranes from neovascular age-related macular degeneration (nAMD) and idiopathic macular epiretinal membrane (IMEM) patients were analyzed (ELISA for IL-3; immunofluorescence for IL-3Rα cell localization). In C57BL/6J mice, laser injury induced CNV. IL-3Rα expression and M2 markers in retinal pigment epithelium–choroid–sclera (RCS) were quantified by Western blot and flat-mount immunofluorescence (IF). Functional relevance was tested in macrophage-specific Il3ra conditional-knockout (CKO) mice. CNV burden was assessed by lesion area/thickness (IF, hematoxylin and eosin [HE], optical coherence tomography) and vascular leakage (fundus fluorescein angiography). Phosphoproteomics (LC-MS/MS) compared RCS from CKO versus control CNV eyes to identify IL-3Rα-dependent nodes, with emphasis on STAT5B Y699.

Results: Vitreous IL-3 levels were higher in nAMD than IMEM, and IL-3Rα colocalized with Iba1⁺ macrophages in human membranes. In mice, IL-3Rα and the M2 marker YM-1 increased in CNV relative to unlasered controls, with IL-3Rα⁺Iba1⁺ cells enriched in lesions. Il3ra CKO significantly reduced CNV area/thickness and leakage, and lowered YM-1/FIZZ1 expression. Phosphoproteomics revealed broadly decreased phosphorylation in CKO CNV tissue; integrating these data implicated reduced STAT5B Y699 phosphorylation as a key downstream event.

Conclusions: IL-3/IL-3Rα signaling promotes STAT5B Y699 phosphorylation, skews macrophages toward an M2-like state, and exacerbates CNV. Targeting this axis—particularly STAT5B phosphorylation—may offer a therapeutic strategy for nAMD.

Abstract No.: 201014
Impact of Bacillary Layer Detachment (BALAD) on Visual Outcomes in Acute Fovea-Involving Rhegmatogenous Retinal Detachment (RRD)

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Purpose: To evaluate the prevalence and prognostic significance of BALAD in patients

with fovea-involving RRD and analyze the association with duration of detachment, presenting and postoperative visual acuity (VA).

Methods: A retrospective observational study included 665 eyes with fovea-involving RRD managed surgically over a five-year period at a tertiary eye center. Optical coherence tomography (OCT) was used preoperatively to assess the presence of BALAD. The primary outcomes measured were prevalence of BALAD, its correlation with duration of retinal detachment and presenting VA and its impact on VA at six months following anatomically successful retinal reattachment.

Results: BALAD was identified in 153 eyes (23%) with fovea-involving RRD. The presence of BALAD was significantly associated with a shorter duration of retinal detachment (mean duration: 3.4 ± 1.8 days in BALAD group vs. 6.1±2.5 days in non-BALAD group, $P < 0.001$). Eyes with BALAD demonstrated significantly worse presenting VA (logMAR 1.9 ± 0.4) compared to those without BALAD (logMAR 1.6 ± 0.3, $P < 0.001$). Six months postoperatively, despite anatomical success, eyes with BALAD had significantly worse final visual outcomes (logMAR 0.9 ± 0.3) compared to eyes without BALAD (logMAR 0.6 ± 0.2, $P < 0.001$).

Conclusions: BALAD is observed in approximately one-fourth of fovea-involving RRD, particularly in cases presenting early after symptom onset. Its presence is associated with poorer presenting and postoperative visual acuity despite successful anatomical reattachment. Recognition of BALAD on preoperative OCT can serve as an important prognostic marker in the management and counseling of patients with acute RRD.

Abstract No.: 200484
Impact of Continuous Versus As-Needed Treatment in Bilateral Diabetic Macular Edema (DME): Efficacy and Safety Outcomes in Port Delivery Platform–Treated Study Eyes Versus Intravitreal Injection–Treated Fellow Eyes in the Pagoda Trial

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Purpose: This post-hoc analysis of patients with bilateral DME in the Pagoda trial (NCT04108156) compares outcomes through week (W) 112 in study eyes (SE) treated with the Port Delivery Platform with ranibizumab (PDS) with fellow eyes (FE) treated with any intravitreal injection.

Methods: This subanalysis population comprised patients treated with PDS (100 mg/mL with refills every 24W) in SE (PDS-SE) that had FE DME at baseline, which had been treated with ≥1 intravitreal injection (IVT-FE). IVT-FE could receive injections at the investigator's discretion at any study visit every 4W.

Results: Through W112, PDS-SE (n = 241) received a mean (standard deviation [SD]) of 8.9 (1.2) ranibizumab treatments (loading, insertion, refill-exchanges, supplemental), while IVT-FE (n = 241) received a mean of 12.2 (7.7) intravitreal injections. In PDS-SE versus IVT-FE, the mean best-corrected visual acuity was 64.2 vs. 69.5 letters at baseline and 74.3 vs. 75.2 letters at W112; the mean central subfield thickness (CST) was 497.8 vs. 399.1µm at baseline and 274.5 vs. 331.0µm at W112. At W112, 50.2%/0.4% of PDS-SE and 31.7%/4.0% of IVT-FE had ≥2-step diabetic retinopathy severity scale (DRSS) improvement/worsening from the baseline. Ocular adverse event (AE) of special interest incidence was similar across PDS-SE and IVT-FE (endophthalmitis 0.4% vs. 0.4%, retinal detachment 0.4% vs. 0.8%, vitreous haemorrhage 10.0% vs. 7.5%).

Conclusions: PDS-SE and IVT-FE had good vision outcomes and similar AE incidence. However, PDS-SE demonstrated better anatomic control and less DRSS worsening, despite unrestricted availability of intravitreal injections for FE and examinations every 4W. These findings suggest PDS could be transformative in managing DME by reducing treatment burden while improving treatment outcomes.

Abstract No.: 200454
Indirect Comparison of the Relative Effectiveness of Faricimab Versus Aflibercept 8 mg in Diabetic Macular Edema (DME) and Neovascular Age-Related Macular Degeneration (nAMD)

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Purpose: To perform a matching-adjusted network meta-analysis (NMA) of efficacy of faricimab versus aflibercept 8 mg at week 12 (after three loading doses) by matching patient populations in phase 3 trials of DME (YOSEMITE/RHINE, PHOTON) and nAMD (TENAYA/LUCERNE, PULSAR).

Methods: Weighting was applied to match patients from YOSEMITE/RHINE (NCT03622580/NCT03622593) and TENAYA/LUCERNE (NCT03823287/NCT03823300) based on baseline characteristics to published aggregated data from PHOTON (NCT04429503) and PULSAR (NCT04423718), respectively. Outcomes from faricimab trials were recalculated using matched populations. NMA anchored to common comparator aflibercept 2 mg was conducted. Analysis focused on change in best-corrected visual acuity (BCVA) in Early Treatment Diabetic Retinopathy Study (ETDRS) letters and central subfield thickness (CST) during the first 12 weeks of treatment when dosing was matched. Results are presented as mean differences in change in BCVA or CST for each aflibercept dose.

Results: For DME, BCVA change from baseline at 12 weeks was similar between faricimab and aflibercept 2 mg (-0.2 letters, 95% credible interval [CrI]: -0.9, 0.5) and 8 mg (-0.8 letters, 95% CrI: -2.2, 0.7); CST reduction was greater for faricimab vs. aflibercept 2 mg (-19.0 µm, 95% CrI: -27.0, -12.0) and 8 mg (-19.0 µm, 95% CrI: -35.0, -3.2). For nAMD, BCVA change was similar between faricimab and aflibercept 2 mg (-0.4 letters, 95% CrI: -1.4, 0.6) and 8 mg (-1.3 letters, 95% CrI: -2.8, 0.3); CST reduction was greater for faricimab vs. aflibercept 2 mg (-19.0 µm, 95% CrI: -24.0, -13.0) and 8 mg (-17.0 µm, 95% CrI: -25.0, -8.4).

Conclusions: In matching-adjusted NMA, faricimab showed greater CST improvements versus aflibercept 8 mg in DME and nAMD four weeks after the third loading dose. Early treatment with a dual-pathway inhibitor may improve outcomes beyond anti–vascular endothelial growth factor monotherapy.

Abstract No.: 200266
Interdisciplinary Management Strategy in Bilateral Ocular Tuberculosis (TB) Retinal Vasculitis

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Purpose: To report a case of TB retinal vasculitis presenting as bilateral occlusive vasculitis with pre-retinal hemorrhage in a young adult male.

Methods: A care report of a young adult presented with pre-retinal hemorrhages in the right eye and occlusive vasculitis in the left eye, evaluated using multimodal imaging (MMI). Clinical examination findings and Snellen visual acuity at presentation and follow-up were reviewed. MMI assessment included optical coherence tomography (OCT), Optos widefield fundus photography, and widefield fundus fluorescein angiography (FFA). Laboratory investigations included a TB screen via the QuantiFERON-TB Gold test.

Results: An 18-year-old male presented with a two-month history of progressively increasing floaters in both eyes without

systemic symptoms or known TB exposure. Clinical examination revealed mild pre-retinal hemorrhages and vasculitis in the right eye. In the left eye, peripheral retinal vasculitis and vitritis were observed. OCT showed no evidence of cystoid macular edema in either eye. A widefield FFA demonstrated bilateral extensive capillary fallout and active vasculitis. TB QuantiFERON testing returned positive. The patient underwent bilateral panretinal photocoagulation laser treatment, which resulted in gradual resolution of the hemorrhages, and was initiated on triple anti-TB therapy.

Conclusions: This patient showed signs of TB retinal vasculitis, typically seen in young Asian Indian males. The case highlights the importance of widefield FFA in detecting early retinal changes for timely treatment. Effective management also necessitates a collaborative, multidisciplinary strategy to address systemic involvement and reduce the risk of long-term complications.

Abstract No.: 200375
Less Shots, Better Sight: Systematic Review and Meta-Analysis of Early-Phase Adeno-Associated Virus (AAV) Gene Therapies in Neovascular Age-Related Macular Degeneration (nAMD)

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Purpose: nAMD requires frequent intravitreal anti–vascular endothelial growth factor (anti-VEGF) injections, imposing substantial treatment burden. AAV-based gene therapies aim to provide sustained anti-VEGF expression, reducing injection frequency and preserving or improving best-corrected visual acuity (BCVA).

Methods: A systematic review was conducted using five main databases (PubMed, Cochrane, Scopus, EBSCO, and ProQuest) for studies published between 2000 and June 2025. We included prospective, interventional phase I–II clinical trials of single-dose AAV-based gene therapies in adult nAMD patients that reported both annual anti-VEGF injection rates and change in BCVA (Early Treatment Diabetic Retinopathy Study [ETDRS] letters). Risk of bias was assessed qualitatively using the Joanna Briggs Institute (JBI) Critical Appraisal Tool. The primary outcomes were mean injections per year and mean ΔBCVA at the last follow-up. A random-effects meta-analysis pooled study-level means with 95% confidence intervals (CI), and heterogeneity was quantified by I^2.

Results: Six phase I–II trials (total N = 225) met inclusion criteria, evaluating AAV.7m8 (Ixo-vec), AAV2.7m8 (ADVM-022), AAV2 (rAAV.sFlt-1), and AAV8 (RGX-314) with follow-up ranging from 12 to 24 months. The combined injection rate was 0.99 injections/year (95% confidence interval [CI]: 0.69–1.28; I^2 = 93.0%), markedly lower than standard monthly regimens. Likewise, mean BCVA improved by 5.66 letters (95% CI :1.58–9.74; I^2 = 98.4%). No vision-threatening adverse events were reported; mild ocular inflammation was manageable.

Conclusions: Early-phase AAV gene therapies in nAMD reduce annual anti-VEGF injection burden to approximately one injection per year and yield clinically meaningful BCVA improvements.

Abstract No.: 201340
Long-Term Follow-Up of Central Serous Chorioretinopathy (CSCR) After Successful Treatment of Half-Dose Photodynamic Therapy (PDT) or Subthreshold Micropulse Laser (SMLT)

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Purpose: To evaluate the recurrence rates of CSCR in patients who had complete resolution of subretinal fluid after treatment with SMLT or half-dose PDT.

Methods: This retrospective review analyzed 52 of the 66 patients from the Half-Dose Photodynamic Therapy Versus Subthreshold Micropulse Laser for the Treatment of Central Serous Chorioretinopathy Treatment Trial. The recurrence rate of CSCR in the first year after

completing the clinical trial was compared between groups.

Results: Of the 52 patients analyzed, 12 in the SMLT group and 5 in the half-dose PDT group experienced a recurrence of subretinal fluid. The recurrence rate was statistically significantly higher in the SMLT group (36.4% vs. 15.2% in the PDT group, P = 0.02). Additionally, CSCR patients who recurred tended to have poorer baseline visual acuity (logMar 0.34 vs. 0.20, P = 0.01) and retinal sensitivity (17.6 vs. 21.0, P = 0.02). Logistic regression identified treatment group (odds ratio [OR] 6.64, 95% confidence interval [CI]: 1.55-28.4) and baseline retinal sensitivity (OR 0.82, 95% CI: 0.69-0.96) as significant factors for predicting recurrence.

Conclusions: While the outcome from our clinical trial showed that treatment outcomes were equivalent between the SMLT and PDT treatment arms, in the year after completing the study, the SMLT group exhibited a higher recurrence rate of CSCR compared to half-dose PDT group. These findings underscore the importance of considering long-term treatment strategies for CSCR management.

Abstract No.: 200131
Longitudinal Follow-up and Implications of Inner Choroidal Remodeling (ICR) in Chronic Central Serous Chorioretinopathy (CSC)

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Purpose: To study longitudinal changes in eyes with ICR and determine its clinical implications in eyes with CSC.

Methods: Records of CSC patients were reviewed to identify eyes with ICR. Clinical features, optical coherence tomography (OCT) findings and indocyanine green angiography (ICGA) details were assessed.

Results: Thirty-nine eyes of 24 patients were identified with ICR. All eyes had complex CSC, with multifocal (33.3%) or diffuse form (66.7%) of choroidal vascular hyperpermeability. A mean of 1.07 lesions were identified per eye, of which 69% involved the fovea. The mean best-corrected visual acuity (BCVA) at the time of presentation (0.68 logMAR, Snellen 20/96) and the last follow-up (0.79 logMAR, Snellen 20/125) were significantly lower than the BCVA reported in literature. At the last follow-up, resolution of CSC was seen in 5 eyes (12.8%). ICR was classified into two patterns, which we termed inner choroidal thickening (ICT) and inner choroidal scarring (ICS). The mean BCVA at the time of presentation (0.84 logMAR, Snellen 20/138 vs. 0.52 logMAR, Snellen 20/66) and the last follow-up (0.89 logMAR vs. 0.67 logMAR) were worse in eyes with ICS, compared to ICT. Eight eyes remodeled from ICT to ICS. There was a nonsignificant decrease in subfoveal choroidal thickness (456 microns vs. 444 microns, P = 0.8) and an increase in lesion size of 4.26 mm² over the follow-up period.

Conclusions: ICR is a novel marker of severity in CSC. The inner choroid shows remodeling with disease progression, and scarring may represent the anatomical endpoint of the disease life cycle.

Abstract No.: 200756
Malignant Growth or Rare Tumour? A Diagnostic Dilemma

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Purpose: Combined hamartoma of retina and retinal pigment epithelium (CHRRPE) is a rare, benign pigmented lesion, commonly in the juxtapapillary region, diagnosed in childhood. Adult presentation warrants a high index of suspicion as choroidal melanoma, adenocarcinoma of RPE, and melanocytoma are important differentials. This is to present a case of a pigmented retinal lesion in a middle-aged patient, which posed diagnostic challenges.

Methods: A 59-year-old female with a history of floaters was found to have a hyperpigmented lesion around the left optic disc. Visual acuity was 6/6, and the anterior segment was unremarkable, without conjunctival melanosis. The vitreous was clear, with a cup-to-disc ratio

of 0.5 and a hyperpigmented peripapillary lesion encircling the optic disc, accompanied by an epiretinal membrane (ERM). The retinal vasculature appeared normal, and no orange nodules were observed.

Results: Optical coherence tomography (OCT) across the lesion demonstrated disorganized inner and outer retinal layers, normal Bruch membrane, and choroid with preserved adjacent retinal architecture. ERM is present, with no subretinal fluid. Fundus autofluorescence (FAF) showed loss of fluorescence in the lesion. Fluorescein angiography (FA) demonstrated early hypofluorescence and leakage at the margins of the lesion in the late phase. Double circulation was not observed, and there were no characteristic B-scan features of melanoma. A diagnosis of combined hamartoma of the retina and RPE was made.

Conclusions: Middle-aged female with floaters and a unilateral peripapillary pigmented retinal lesion is a sinister constellation of features. Malignancy is the highest priority in this age group, and choroidal melanoma, adenocarcinoma of RPE are top contenders. Multimodal imaging with FAF, ultrasound, FA and OCT can collectively rule out malignancy. Serial fundal photographs with routine follow-up are advised when in doubt.

Abstract No.: 200520
Management Dilemma in a Case of Coats Disease Presenting With a Tumor-Like Macular Lesion

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Purpose: To describe the approach and management of case of Coats disease with a tumor-like macular lesion.

Methods: An 11-year-old male presented with gradual, painless loss of vision in the right eye over three years. Fundus examination revealed the classic fundus findings of Coats Disease, such as retinal telangiectasia at the temporal periphery, which was surrounded by extensive subretinal yellowish exudates, extending to the macula. However, there was a note of a whitish tumor-like lesion in the macula similar to the appearance of a retinoblastoma lesion. Hence, retinoblastoma had to be ruled out before commencing treatment. The fellow eye was normal.

Results: B-scan ultrasonography, optical coherence tomography of the macula, and fluorescein angiography, along with cranial magnetic resonance imaging with Gadolinium contrast, were done for further investigation. The information gathered from these diagnostic examinations was the basis for the approach to the management of this case, which included focal laser photocoagulation and intravitreal anti–vascular endothelial growth factor (anti-VEGF) injection.

Conclusions: The treatment of Coats disease is straightforward and includes laser photocoagulation and intravitreal injection of anti-VEGF. However, when complicated by the presence of a tumor-like lesion, further investigation is warranted to rule out a malignancy. Multimodal imaging and a high clinical index of suspicion are crucial in arriving at a diagnosis and management approach.

Abstract No.: 200891
Melatonin Alleviates Subretinal Fibrosis in Laser-Induced Murine Model and Epithelial-Mesenchymal Transition via Regulating the GSK-3β/A20/Smd2/3 Pathway

*First Author: Kunbei **LAI****
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Purpose: This study investigated the potential effects of melatonin on subretinal fibrosis of choroidal neovascularization (CNV) lesions and epithelial-mesenchymal transformation (EMT), as well as explored the underlying mechanisms.

Methods: A murine model of subretinal fibrosis in CNV lesions was established in C57BL/6 mice using a standardized two-stage laser photocoagulation protocol. Melatonin was administered intraperitoneally starting one day before the laser until day 7 or 14 post–

first laser. The areas of CNV and subretinal fibrosis of CNV lesions were assessed through imaging examination and immunofluorescence staining. In vitro, melatonin was administered to TGFβ1-treated primary mouse retinal pigment epithelium (mRPE) cells. Western blot, quantitative real-time polymerase chain reaction (PCR), immunofluorescence staining, scratch wound, Transwell migration, and collagen gel contraction assays were employed to evaluate the change of EMT and relevant pathways.

Results: Melatonin significantly reduced the subretinal fibrosis areas and colocalization of α-SMA/RPE65 in CNV lesions at days 7 and 14. In vitro, TGF-β1-treated mRPE cells exhibited increased migration and contraction, upregulated fibronectin, α-SMA, Snail and PAI-1, and downregulated E-cadherin and ZO-1. Melatonin cotreatment reversed these changes. Mechanistically, melatonin modulated the GSK-3β/A20/Smad2/3 pathway in TGF-β1-stimulated mRPE cells.

Conclusions: Melatonin significantly inhibits EMT in RPE cells and subretinal fibrosis in CNV lesions, primarily by regulating the GSK-3β/A20/Smad2/3 pathway. These findings suggest melatonin as a promising therapeutic agent for subretinal fibrosis lesions.

Abstract No.: 200727
Mobile-Based Artificial Intelligence (AI) Application in Identifying Plus Disease in Retinopathy of Prematurity (ROP): A Diagnostic Accuracy Study

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Purpose: To determine the diagnostic accuracy of a mobile-based AI application in identifying plus disease of ROP.

Methods: A cross-sectional analytical study conducted in a level III government hospital. The study population included RetCam3-acquired fundus images of all infants referred to the Department of Ophthalmology for ROP Screening from January 1, 2021, to June 30, 2024. Images were captured through the iRop Assist AI Application using iPad Pro 11 and were also read by three ROP experts. All results were tabulated using Microsoft Office Excel V16.81. Statistical analysis was done using SPSS Software.

Results: The mobile-based AI application showed higher identification rates for plus/preplus disease compared to ROP experts, with 20.88% identified in both eyes by the AI and lower rates by the experts. Cross-tabulation reveals that both methods agreed on a substantial percentage of cases, with a small portion of cases misidentified by the AI. The sensitivity analysis for plus/preplus disease demonstrated 100% for both eyes, while the specificity scores were slightly lower. The positive predictive value (PPV) was 68% for the right eye and 71% for the left eye, with 100% negative predictive value (NPV) for both eyes. Cohen's Kappa analysis showed strong agreement between the mobile-based AI and ROP experts, indicating substantial consistency between the two diagnostic methods.

Conclusions: The findings suggest that the mobile-based AI application shows great potential as a diagnostic tool for ROP screening, offering both accuracy and reliability in detecting plus/preplus disease.

Abstract No.: 201184
Molecular Pathological Characteristics of Early Diabetic Retinopathy Caused by High-Fat Diet

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Purpose: To explore the multi-omics changes in the retina of high-fat diet-fed diabetic model (HFD-DM) mice, discover the molecular characteristics of early diabetic retinopathy caused by high-fat diet, and provide a theoretical basis for the early prevention of retinopathy in diabetic patients.

Methods: A HFD-DM was established by feeding mice with high-fat diet for 10 months. The changes in retinal morphology and function were detected by optical coherence tomography, and electroretinogram (ERG). The changes in markers were detected by retinal

section immunofluorescence staining. The early molecular characteristics of diabetic retinopathy were detected by single-cell transcriptomic sequencing, proteomics, and lipidomics techniques.

Results: HFD-DM mice showed increased body weight, elevated blood glucose levels, and liver fat infiltration. No obvious leakage was observed in fundus fluorescein angiography (FFA), but ERG showed a decrease in b-wave in HFD-DM mice. Hematoxylin and eosin (HE) staining showed that the outer retina of HFD-DM mice was thinner. Single-cell transcriptomic sequencing showed that the gene expression landscape of different cells of HFD-DM mice was heterogeneous. The expression of microglial inflammatory factors such as CCL12 and CCL3 was significantly increased, and autophagy-related genes in microglia and rod such as LC3B/LC3A and SQSTM1 was decreased. Proteomics and lipidomics show significant enrichment in arachidonic acid metabolism and cholesterol metabolism pathways.

Conclusions: High-fat diet-fed diabetic mice showed abnormal retinal structure and function, and the transcriptomic changes can provide a theoretical basis for the mechanism research of early diabetic retinopathy.

Abstract No.: 200779
Multimodal Imaging in Best Vitelliform Macular Dystrophy in Two Siblings With Different Manifestations

*First Author: Apoorva **JADHAV***

Purpose: To describe the clinical and multimodal imaging findings of two siblings with different manifestations of Best vitelliform macular dystrophy.

Methods: A review of two siblings was conducted, and complementary fundus images, color photography, autofluorescence, fluorescein angiography, optical coherence tomography angiography (OCTA), optical coherence tomography (OCT), electrooculography (EOG), and electroretinography (ERG) were performed.

Results: A 34-year-old female, along with her 24-year-old sister, came for an ophthalmological checkup. Findings of the 34-year-old female are as follow: Color fundus photograph showed multiple small, round, yellow subretinal lesions on the posterior pole extending beyond the arcades. Multicolor image showed a greenish hue over the macula and multiple orange spots corresponding to yellow lesions. Fundus autofluorescence (FAF) showed multiple hyperautofluorescent lesions. Near-infrared reflectance image showed multiple white hyperreflective spots, suggestive of alterations retinal pigment epithelium level, while green and blue reflectance image showed no abnormality. OCT showed subretinal fluid and shaggy photoreceptors. Fundus fluorescein angiography (FFA) and indocyanine green angiography (ICGA) showed staining. EOG was abnormal. Findings of the other sibling are: Fundoscopy revealed macular yellowish deposits. FAF showed a small, rounded subfoveal hyperautofluorescent material, surrounded by hypoautofluorescence. OCT evidenced serous macular detachment. OCTA showed a network suggestive of neovascularization. FFA revealed staining with fuzziness. ERG was normal, and EOG was abnormal.

Conclusions: This report highlights the multimodal imaging of multifocal Best disease (MBD) and will help clinicians to differentiate it from similar lesions.

Abstract No.: 200504
Multimodal Imaging in Morning Glory Disc Anomaly Associated With Serous Retinal Detachment and Retinoschisis : An Atypical Case

*First Author: Apoorva **JADHAV***

Purpose: To highlight the importance of multimodal retinal imaging in a case of morning glory syndrome associated with serous retinal detachment and retinoschisis.

Methods: A 62-year-old gentleman came with a decrease in vision in the left eye. A thorough ophthalmological examination was performed

with multimodal imaging consisting of colour fundus examination, swept-source optical coherence tomography (SSOCT), fundus fluorescein angiography, multicolour imaging, autofluorescence, and infrared reflectance.

Results: A 62-year-old gentleman came with a decrease in vision in the left eye. Fundus examination showed a large excavated optic disc with a central area of fibroglial tissue, multiple thin blood vessels emerging from the edge of the disc running radially in an abnormally straight course over the peripapillary retina with peripapillary subretinal fluid and pigmentary changes. Fluorescein angiography showed peripapillary hyperfluorescence due to a window defect, increasing in late phases. SSOCT through the left optic nerve head showed a deep excavation of the optic nerve with glial tissue at the base of the excavation, with peripapillary subretinal fluid and retinoschisis. Autofluorescence image revealed peripapillary hyperautofluoresence. Multicolour imaging showed a linear appearance of the retinal vessels radiating from the optic disc.

Conclusions: Based on this case, we have described the clinical and multimodal imaging features of morning glory papillary anomaly and emphasized the importance of multimodal imaging in the diagnosis of the most serious complications, such as retinal detachment.

Abstract No.: 200430
Mutations in RP1 and BEST1 in a Patient With Retinitis Pigmentosa

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*Co-Author(s): Katherine Marl **FERRER**, Rafael **FONTANILLA***

Purpose: This study reports on a 44-year-old Filipino male who is compound heterozygous for the RP1 gene, one of which is novel, and heterozygous for the BEST1 gene, exhibiting overlapping retinitis pigmentosa features associated with mutations in both genes.

Methods: This case report includes the history, examination, diagnostics, and inherited retinal dystrophy panel testing via next-generation sequencing.

Results: The patient presented with a 9-year history of nyctalopia and progressive vision loss. Examination showed 20/20 vision, constricted visual fields, and classic retinitis pigmentosa with mid-peripheral degeneration and bony spicule-like pigments. Fundus photos, full-field electroretinograms, and optical coherence tomography of the macula supported a diagnosis of classic retinitis pigmentosa. However, there were also notes of whitish patches around the macula in both eyes that hyperfluoresced on fluorescein angiography. Genetic testing revealed one pathogenic variant in RP1 c.6124del (p.Leu2042*), and another unreported variant of unknown significance in RP1 t c.5819A>G (p.Tyr1937Cys). This particular variant is not present in population database sets and is predicted to be damaging. The patient also carried a pathogenic variant in BEST1 t c.508C>T (p.Gln170*) which is also associated with retinitis pigmentosa and autosomal recessive bestrophinopathy.

Conclusions: The case of a patient with retinitis pigmentosa carrying both RP1 and BEST1 mutations, who may have exhibited features from both genes, highlights the genetic complexity of retinitis pigmentosa. The identified variants and phenotype of the patient may expand the genetic landscape of retinitis pigmentosa, emphasizing the role of genetic testing in diagnosis and novel variant identification.

Abstract No.: 200815
Non-Ischemic Central Retinal Vein Occlusion with Macular Edema Uncovered After Emergency Phacoemulsification for Phacolytic Glaucoma Subsequently Treated With Intravitreal Bevacizumab

*First Author: Mayjane Joan **TUMULAK***
*Co-Author(s): Benedicto Juan Enrique **AGUILAR**, Gabrielle **EVANGELISTA-SIA***

Purpose: To present the case of a 52-year-old male with persistent blurring of vision following emergency cataract surgery.

Methods: A case report.

Results: A 52-year-old male presented at the clinic for a two-week history of right-eye pain and loss of vision, associated with nausea and right-sided headache. The patient was initially treated medically at a local public hospital by a local ophthalmologist and referred to our institution. Visual acuity showed light projection with hand motion. Anterior segment examination showed anterior pupillary membrane bordering occlusio pupillae, with 180-degree cumulative posterior synechiae, deep chamber, with no notable relative afferent pupillary defect or reverse. Intraocular pressure was 40, improved to 22 with oral acetazolamide. The patient was a known diabetic with a note of nonproliferative diabetic retinopathy in the contralateral eye but no history of eye trauma. Patient underwent emergency phacoemulsification with intraocular lens, with postoperative visual acuity of 20/200, +4 cells, and corneal edema. Fundus examination showed generalized blot hemorrhages and macular edema. The patient was given sub-Tenon triamcinolone and advised for intravitreal anti–vascular endothelial growth factor (anti-VEGF), which the patient underwent after one month. Interim visual acuity was 20/100, with subsequent improvement to best-corrected visual acuity of 20/32 two weeks post-anti-VEGF.

Conclusions: Central retinal vein occlusion may follow intraocular pressure increase from phacolytic glaucoma. Subsequent macular edema may benefit from the injection of intravitreal bevacizumab.

Abstract No.: 200478
Ocular Manifestations of a Family With Marfan Syndrome and Osteogenesis Imperfecta

*First Author: Pia Regina **GALVANTE***
*Co-Author(s): Nikolai Thadeus **MAPPATAO***

Purpose: To report a case series of a Filipino family with ocular manifestations of Marfan syndrome and osteogenesis imperfecta.

Methods: Comprehensive ophthalmologic evaluation was performed on all patients. Fundus photography was conducted for each individual, and two patients received 360-degree retinal barrier laser treatment. Corneal tomography was performed on one patient to assess corneal structure. All patients were monitored for progression of ocular manifestations related to Marfan syndrome and osteogenesis imperfecta.

Results: The three sons (ages 30, 27, and 22) exhibited blue sclerae, superior ectopia lentis, and lattice degeneration. The second son had lens coloboma in both eyes, pathologic myopia, and lenticular astigmatism. The third son showed lenticular astigmatism and keratoconus in the right eye. Corneal tomography revealed corneal thinning without keratoconus in the second son. No surgical interventions have been performed to date; however, special considerations for scleral-fixated intraocular lens implantation are ongoing due to the integrity of the bluish sclera.

Conclusions: This case series highlights the diverse ocular manifestations of Marfan syndrome and osteogenesis imperfecta, especially in a family with multiple affected members. The presence of vision-threatening features emphasizes the need for early diagnosis and personalized management. Ongoing monitoring is essential to track progression, especially regarding lens subluxation and retinal detachment. Careful attention to scleral integrity is critical for planning potential surgical interventions, such as scleral-fixated intraocular lens implantation.

Abstract No.: 200656
Oculocardiac Reflex (OCR) Following Intravitreal Injections – An Observational Study

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Purpose: OCR, defined as a 20% reduction in heart rate on mechanical manipulation of the eye, is a vagal reflex that can have devastating complications such as arrhythmias and asystole. Administration of intravitreal injections (IVI) is a common procedure done outside the theater

set-up, where resuscitation equipment may not be readily available. This study was done to assess the prevalence of OCR after IVI. It has been quantified only in one previously published study where the prevalence was 3.3%.

Methods: A total of 252 cases with IVI administration in a hospital in Colombo, Sri Lanka, were evaluated in the study. The injections given were bevacizumab and triamcinolone. Heart rate was measured via pulse oximeter before and after the procedure. The statistical significance was analyzed using chi square test.

Results: Out of the 252 cases, 28 showed a reduction of >20% of preprocedure heart rate indicating OCR, which was statistically significant (11.06%, $P < 0.00001$). However, OCR was asymptomatic in all cases. The average age of the participants was 60.6. Of the 144 patients aged 60 and above, 18 showed OCR (12.5%). Of the 108 patients below the age of 60, 10 cases of OCR were observed (9.25%). The association between OCR and these age groups was not statistically significant ($P = 0.417$).

Conclusions: OCR occurred after administration of IVI in a statistically significant proportion in this study which complements the previous study done. Therefore, keeping resuscitation equipment on standby, even in an nontheater setting, is suggested, anticipating possible complications.

Abstract No.: 201012
Of Ectopic Networks, Vitelliform Lesions and Fibrotic Capillaries – Imaging Curiosities in Macular Telangiectasia (MacTel)

*First Author: Apoorva **AYACHIT***
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Purpose: To highlight unusual imaging findings in MacTel and explore their diagnostic and clinical implications.

Methods: This retrospective, observational case series included five patients diagnosed with MacTel who exhibited atypical imaging features. Each patient underwent comprehensive ocular imaging using multicolour imaging, fundus autofluorescence, infrared reflectance, confocal blue reflectance, spectral-domain optical coherence tomography (SDOCT) and OCT angiography (OCTA).

Results: Several unique imaging presentations were noted. The first case demonstrated subretinal neovascular membrane within the MacTel area but superiorly, challenging the usual temporal predilection. The second case revealed crystalline deposits, plaques and subretinal neovascular membrane superotemporally, with a well-defined neovascular network in the avascular outer retina. The third case illustrated subinternal limiting membrane neovascularization — a rare entity in MacTel with corresponding flow signals on OCTA. A fourth case detailed longitudinal imaging of MacTel with vitelliform lesions, "cavernous" fluid and results of anti–vascular endothelial growth factor therapy. Lastly, a case of MacTel with atypical fibrotic changes not explained by a thin epiretinal membrane, raising the question of the intrinsic contractile behaviour of telangiectatic vessels. Each case presented challenges in diagnosis due to deviations from classic MacTel imaging patterns. OCTA was particularly valuable in delineating neovascular components in avascular retina.

Conclusions: MacTel can manifest with a diverse range of imaging phenotypes, some of which fall outside classical descriptions.

Abstract No.: 200535
Optimal Timing of Combination Therapy for Diabetic Macular Edema (DME) and Impact of Edema Recurrence on Anatomical Outcomes

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Purpose: To evaluate the influence of edema recurrence frequency and amplitude on visual and anatomical outcomes in DME patients, and the optimal timing for combination therapy.

Methods: This retrospective study included 106 treatment-naïve DME patients (164 eyes).

Patients received either monotherapy with conbercept or combination therapy with conbercept and DEX-I. Both groups underwent three initial monthly conbercept injections followed by pro re nata (PRN) treatment. The combination group received DEX-I at three time points: 1) at the first anti–vascular endothelial growth factor (anti-VEGF) injection, 2) at the second or third injection, and 3) after the third injection. The best-corrected visual acuity (BCVA) was assessed using the international standard visual acuity chart, and central macular thickness (CMT) was measured using optical coherence tomography. Analysis of covariance (ANCOVA) was used to analyze the optimal timing for combination therapy and the impact of edema recurrence on final outcomes.

Results: The 164 eyes were followed up for a mean of 17.5 months. The final CMT analysis showed that recurrence frequency and amplitude were significant predictors of final CMT ($P = 0.041$ and $P = 0.017$, respectively). Each additional recurrence increased final CMT by 36.2 µm (95% confidence interval [CI]: 6.7-65.8). For every 100 µm increase in CMT difference from baseline during recurrence, final CMT increased by 20 µm (95% CI: 0.1-4). ANCOVA revealed that earlier combination therapy was associated with better final BCVA ($P = 0.040$). For every time point delaying in combination therapy, final visual acuity decreases by mean 0.1 LogMAR (95% CI: -0.2-0).

Conclusions: Edema recurrence significantly impacts final CMT in DME patients. Combination therapy with earlier initiation yielding superior outcomes.

Abstract No.: 200729
Patterns of Retinal Changes in Patients With Pregnancy-Induced Hypertension (PIH) in a Level III Government Hospital

*First Author: Rachelle **ANZURES***
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Purpose: To determine the patterns of retinal changes in patients with PIH.

Methods: This is a retrospective cross-sectional analytical study conducted in Ospital ng Makati, Philippines. The study population included all patients referred to the Department of Ophthalmology and diagnosed with PIH from January 1, 2018, to December 31, 2019. Patients' age, number of pregnancies, gestation period in weeks, blood pressure, proteinuria, and severity of PIH were noted from their clinical records as well as the ophthalmologic findings. Statistical analysis was done using RStudio.

Results: Out of 626 patients (mean age 31.6 years), most (86.81%) were over 33 weeks pregnant (range 21-42 weeks), and 23.94% were primigravid. Hypertension was common: 41.69% had blood pressure (BP) >160/100, with diagnoses including chronic hypertension (15.31%), gestational hypertension (42.35%), preeclampsia/eclampsia (33.39%), and preeclampsia superimposed on chronic hypertension (8.96%). Proteinuria was present in 16.29%. Pregnancy duration, BP, PIH severity, and proteinuria were all significantly associated with bilateral retinal changes ($P < 0.001$).

Conclusions: Retinal changes are frequently seen in patients with BP of >160/100, preeclampsia and eclampsia syndrome, preeclampsia superimposed on chronic hypertension, and the presence of proteinuria. On the other hand, for patients with >32 weeks AOG or with gestational hypertension, the odds of having retinal changes are lowered. The correlation of retinal changes with the severity of PIH can be helpful in monitoring and managing cases. Fundus examination in PIH can greatly help in predicting the severity of PIH and in the timely management of such cases.

Abstract No.: 200120
Performance Assessment of an Artificial Intelligence (AI) System Used for Case Detection in a Large Community-Based Diabetic Retinopathy (DR) Screening Program in La Union

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Purpose: To validate the iCare DRS Plus AI system on Filipino diabetic cohorts within the uncontrolled environment of a community-based setting before it can be adapted and integrated into routine DR screening programs in the Philippines.

Methods: The diagnostic performance of the iCare Illume System (Thirona RetCAD + iCare DRS plus) in detecting any stage DR (ADR) and referable DR (RDR) was validated against a reference standard of two-field fundus photographs read by expert human graders (retina specialists). The evaluation was conducted using sensitivity (SN), specificity (SP), negative predictive value (NPV), positive predictive value (PPV), negative likelihood ratio (LR-), and positive likelihood ratio (LR+).

Results: A total of 284 eyes (142 diabetic patients and 717 images) were included in the study. The iCare Illume AI system achieved an accuracy of 83.21% and 92.37% for ADR and RDR, respectively. The SN, SP, NPV, PPV, LR-, and LR+ for ADR were 92.11%, 79.57%, 96.1%, 64.81%, 0.10, and 4.50, respectively. The SN, SP, NPV, PPV, LR-, and LR+ for RDR were 79.03%, 96.50%, 93.69%, 87.50%, 0.22, and 22.58. The technical failure rate was 0.70% (with 99.3% imageability).

Conclusions: The iCare Illume AI system exhibits strong diagnostic accuracy in screening for RDR in our cohort of Filipino diabetics. Although its sensitivity is marginally below the UK's National Institute for Health and Care Excellence (NICE) guideline, the system demonstrates high specificity, negative predictive value, and positive predictive value. This combination highlights its potential as a valuable tool for DR screening in the Philippines.

Abstract No.: 200743
Peripapillary Capillary Density Analysis Using Optical Coherence Tomography Angiography (OCTA) in Diabetic Retinopathy (DR)

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Purpose: This study aimed to quantitatively evaluate the peripapillary capillary density in patients with nonproliferative diabetic retinopathy (NPDR) using OCTA, focusing on three distinct vascular layers: radial peripapillary capillaries (RPC), superficial capillary plexus (SCP), and deep capillary plexus (DCP).

Methods: A total of 25 eyes of 14 NPDR patients (mean age: 60.9 years) and 22 eyes of 13 healthy controls (mean age: 45.5 years) were included. Widefield 12 × 12 mm OCTA scans centered on the optic nerve head were acquired using the PLEX® Elite 9000 (Zeiss). Capillary vessel density (%) was calculated for each layer within a 6-mm-diameter circular region excluding the optic disc, using binarized en face images processed with ImageJ.

Results: The RPC density was significantly reduced in the NPDR group (17.5 ± 3.8%) compared to the control group (23.6 ± 6.9%, $P < 0.001$). DCP density was also lower in NPDR eyes (20.2 ± 4.1%) than in healthy eyes (23.7 ± 4.4%, $P < 0.001$). In contrast, SCP density was higher in the DR group (25.0 ± 5.4%) than in controls (23.0 ± 2.8%, $P < 0.05$). In the control group, there were no significant differences among the three layers, whereas in NPDR eyes, both RPC and DCP densities were significantly lower than SCP (both, $P < 0.001$).

Conclusions: These findings suggest that RPC and DCP are more vulnerable to early microvascular impairment in DR and may serve as sensitive biomarkers for early optic nerve involvement detectable by OCTA.

Abstract No.: 200335
Peripheral Exudative Hemorrhagic Chorioretinopathy (PEHCR): A Case Series Highlighting Clinical Diversity and Diagnostic Pitfalls

First Author: Afroz ***PATEL***
Co-Author(s): Jaydeep ***WALINJKAR***

Purpose: To describe the clinical spectrum, imaging characteristics, and management outcomes of patients diagnosed with PEHCR, a rare and often misdiagnosed retinal condition.

Methods: A retrospective case series of two patients diagnosed with PEHCR at a tertiary eye care center. Clinical presentation, multimodal imaging findings including widefield fundus photography, optical coherence tomography, fundus fluorescein angiography, and indocyanine green angiography, and treatment outcomes were analyzed.

Results: Presentations varied from incidental detection on routine examination to symptomatic cases with floaters, peripheral scotomas, or photopsia. Multimodal imaging revealed peripheral subretinal hemorrhage, exudation, and pigmentary changes consistent with PEHCR. Differential diagnoses included choroidal melanoma, vasoproliferative tumors, and retinal detachment. The majority of cases were managed conservatively with observation. A subset of patients showing persistent activity or macular involvement received intravitreal anti–vascular endothelial growth factor injections with stabilization of findings.

Conclusions: PEHCR is a masquerading peripheral retinal pathology that can mimic serious ocular tumors and other retinal conditions, often leading to diagnostic dilemmas. Recognition of its distinct clinical and imaging features is essential to avoid unnecessary interventions and to guide appropriate management, which is often conservative.

Abstract No.: 200160
Posterior Segment Findings Among Carotid-Cavernous Fistula (CCF) Patients in a Tertiary Hospital

First Author: Felice Katrina ***RANCHE***
Co-Author(s): Oscar Jr ***ACOPIADO****, Jose Carlo* ***ARTIAGA***

Purpose: To describe the posterior segment findings in patients with CCF and to correlate these findings with treatment outcomes.

Methods: Single-center retrospective cross-sectional medical chart review.

Results: A total of 141 patients, or 161 eyes, diagnosed with CCF using cerebral angiography were identified between January 2011 and December 2023. Direct CCF (DCCF) patients (63.8%) were of younger population (mean 35.2 years), had male predominance (72.2%), and generally had a history of trauma (95.6%). Indirect CCF (ICCF) patients (36.2%) were of an older population (mean 50.6 years), had female predominance (70.6%), and were associated with vascular comorbidities such as hypertension (58.8%) and diabetes (19.6%). Mild-to-moderate visual impairment was more common in the Indirect type (94.6%), while blindness was notably high in the Direct type (14.6%). The most common posterior segment findings were retinal vessel tortuosity (35.2% in DCCF, 21.4% in ICCF) and disc cupping (29.5% in DCCF, 23.2% in ICCF). The most common posterior segment diagnoses were secondary glaucoma (27.6% in DCCF, 25.0% in ICCF), followed by venous stasis retinopathy (21.9% in DCCF, 12.5% in ICCF). DCCF is associated with a high incidence of traumatic optic neuropathy, contributing to severe visual impairment. No significant differences were observed by the type of CCF and the type of treatment in terms of changes in posterior segment findings and diagnoses.

Conclusions: Approximately one-third of CCF patients have posterior segment findings related to venous congestion, such as stasis retinopathy and secondary glaucoma, regardless of the type of CCF and treatment

strategy. Blindness is more associated with DCCF.

Abstract No.: 200508
Practice Patterns and Preferences in the Management of Age-Related Macular Degeneration (AMD) Among Vitreoretinal Surgeons in the Philippines

First Author: Reny Rose ***SABADO***
Co-Author(s): Romulo ***AGUILAR****, Kristine* ***CORPUS-VELASQUEZ***

Purpose: To determine the practice patterns and preferences in the management of AMD among vitreoretinal surgeons in the Philippines.

Methods: This is a descriptive cross-sectional study. A validated online survey regarding practices in AMD management was sent to the members of the Vitreo-Retina Society of the Philippines (VRSP). Data were analyzed using frequency and per cent distributions.

Results: A total of 114 vitreoretinal surgeons participated in the study. The majority (97.4%) inquired about patients' smoking habits and advised cessation (99.1%). Dietary advice (94.7%) focused on omega-3-rich foods and green, leafy vegetables. Oral antioxidant supplements were prescribed for unilateral intermediate AMD (83.3%), with the Age-Related Eye Disease Studies (AREDS) formula most commonly used (25.7%). Anti–vascular endothelial growth factor (anti-VEGF) was preferred for subfoveal (99.1%), juxtafoveal (94.7%), and extrafoveal (73.5%) choroidal neovascularization, with bevacizumab being the most frequently administered agent (72.6%) and aflibercept (83.2%) the most preferred due to cost considerations. The treat-and-extend protocol was followed by 58.4%, while 38.9% used a pro re nata approach. Treatment response was primarily evaluated by fluid reduction on optical coherence tomography, with intraretinal fluid being the most critical (48.7%). Most surgeons (86.7%) switched anti-VEGF agents for poor response, and 80.5% did so when no response was seen. Referral to low vision specialists was most often based on difficulty performing daily activities regardless of visual acuity.

Conclusions: Real-world practice patterns and preferences of the VRSP members generally align with the globally recognized management standards for AMD.

Abstract No.: 200763
Predicting Exudation in Treatment-Naïve, Nonexudative Polypoidal Choroidal Vasculopathy (PCV): A Prospective Swept-Source Optical Coherence Tomography Angiography (SSOCTA) Observational Cohort Study

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Purpose: To characterize short-term structural evolution on SSOCT/OCTA in treatment-naïve, nonexudative PCV, and to identify baseline biomarkers predictive of exudative conversion.

Methods: This prospective observational study enrolled 10 eyes from 10 patients, who met APOIS OCTA and EVEREST indocyanine angiography criteria for PCV yet displayed no subretinal or intraretinal fluid, subretinal hyperreflective material, or hemorrhage. Baseline and follow-up 6 × 6 mm spectral-domain OCTA and SSOCTA volumes (7-18 months) were analyzed for branching vascular network (BVN) area, polyp count, pigment epithelial detachment (PED) height and reflectivity, and subfoveal choroidal thickness. Fellow eyes were graded for active exudation.

Results: Participants were asymptomatic and identified during fellow-eye review or routine screening. Five of nine eyes (55.6 %) converted to exudation after a mean of nine months. Converting eyes more often harboured ≥4 polyps and showed taller PEDs (249 µm vs. 232 µm) and thicker choroids (318 µm vs. 236 µm); paradoxically, their BVN area was slightly smaller than that of nonconverters (2.80 mm^2 vs. 3.28 mm^2). Active exudation in the contralateral eye was present in two converters (40 %) and one nonconverter.

Conclusions: Over half of nonexudative PCV eyes progressed to exudation within 18 months. Multiple polyps, increased PED height,

greater choroidal thickness, and an exudative fellow eye emerged as practical SSOCTA warning signs, whereas BVN size alone was not predictive. Routine bilateral OCTA surveillance can flag high-risk eyes early, enabling timely intervention and vision preservation.

Abstract No.: 201098
Preliminary Study of Real-World Evidence of Faricimab for Diabetic Macular Edema (DME) in Central Taiwan Medical Center

*First Author: Tsai-wei **LIN***
*Co-Author(s): Juan **KUO HUA***

Purpose: We published a retrospective interventional study with intravitreal faricimab in treatment-naïve patients with DME. Retinal anatomical changes and visual acuity, are emphasized in this study. Besides, we also compared the effectiveness of faricimab in subgroups with epiretinal membrane (ERM).

Methods: A retrospective study was conducted to analyze from January, 2024, to June, 2025, and followed treat-and-extent protocol with patients receiving at least three loading dosages.

Results: We enrolled 39 eyes from 29 patients. After three loading doses, a reduction of central retinal thickness (CRT) was 98.5 μm ($P < 0.05$), and an even greater reduction of 121.5 μm after fifth intravitreal injection (IVI). In subgroup analysis, ERM group had a thicker CRT initially; however, the reduction of CRT of 163 μm ($P < 0.05$) was also significant after five injections. There was also a significant reduction of numbers of hard exudates. We manually counted the hard exudates(>50 μm in size) in a 3-mm area of fovea and revealed a reduction from 12 to 5 ($P < 0.05$). Naturally, significantly resolution of intraretinal fluid (IRF) and subretinal fluid (SRF) was also noticed. Only 10.34% of patients still had SRF after five IVIs, dropped from 48.28% initially. It revealed a great decline in IRF from 100% to 65.52% as well.

Conclusions: Faricimab provides a new treatment option in DME with dual-pathway inhibition of vascular endothelial growth factor and angiopoietin-2. This real world study indicates that faricimab had rapid retinal drying character and significantly decrease in hard exudates considered as inflammatory biomarker. Subgroup analysis revealed that in patients with ERM, faricimab can also provide effective treatments. Our real world results echoed the previous faricimab studies.

Abstract No.: 201353
Purtscher-Like Retinopathy With Macular Ischemia Secondary to Valsalva Maneuver Effect: A Case Report

*First Author: Albert John **BORROMEO***
*Co-Author(s): Cheryl Myla **ARCINUE**, Maria Margarita Elizabeth **JAVIER***

Purpose: Purtscher-like retinopathy is an uncommon condition describing the findings of multiple flecken lesions in the retina without an association with trauma. Addressing the underlying systemic condition is often the mainstay approach in management. We describe a case of an unusual presentation of Purtscher-like retinopathy associated with Valsalva maneuver effect.

Methods: A case report.

Results: A 36-year-old male presented with sudden blurring of vision in the left eye following vomiting and retching after alcohol bingeing. Vision on the right eye was 20/20 while on the left was hand movement. Fundoscopy on the left eye showed disc oedema with cotton wool spots on the macula and peripapillary area, dilated and tortuous vessels and hemorrhages in the periphery. Optical coherence tomography showed subretinal fluid, while fluorescein angiogram showed occlusive retinal vasculitis with macular ischemia. Workup showed normal levels of lipase and amylase but elevated triglycerides and HbA1C. The patient was started on monthly intravitreal bevacizumab injections and systemic corticosteroids. At eight weeks follow-up, vision in the left eye improved to counting fingers, along with findings of resolved disc edema, resolving intraretinal hemorrhages and cotton-wool spots and resolution of subretinal fluid.

Conclusions: Systemic vascular stressors and Valsalva maneuver effect may act as a trigger in contributing to a Purtscher-like retinopathy. There is no established treatment for the condition and visual prognosis is guarded.

Abstract No.: 200759
Real-World Comparison of Angiopoietin-2/Vascular Endothelial Growth Factor A (Ang-2/VEGFA) Dual Inhibition and VEGFA Monotherapy for Diabetic Macular Edema (DME): A Single-Center Taiwanese Cohort

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Purpose: To compare the 12-month efficacy and safety of faricimab versus aflibercept in treatment-naïve DME at a single tertiary center in Taiwan.

Methods: We retrospectively reviewed 361 consecutive eyes—167 given faricimab 6 mg and 194 aflibercept 2 mg—started between 1 January 2024 and 30 June 2025, each with ≥12 months of follow-up. Faricimab eyes received four monthly injections, an eight-week interval dose, then treat-and-extend (T&E, 4–16 weeks); aflibercept followed the center's standard T&E. Primary outcomes were 12-month change in best-corrected visual acuity (BCVA, logMAR), central retinal thickness (CRT), and the proportion with CRT <280 µm. Secondary outcomes were epiretinal membrane (ERM) and ocular adverse events (AEs).

Results: Baseline BCVA was 0.52 ± 0.24 logMAR in the faricimab group and 0.54 ± 0.26 in the aflibercept group; CRT was 394 ± 83 versus 419 ± 91 µm. At month 12, faricimab produced greater BCVA improvement (-0.17 ± 0.18 vs. -0.12 ± 0.17 logMAR, P = 0.03) and larger CRT reduction (-128 ± 95 vs. -107 ± 102 µm, P = 0.04); 57% versus 49% achieved CRT <280 µm (P = 0.01). Secondary ERM formation (6.16% vs. 21.29 %) and AEs showed no intraocular inflammation or endophthalmitis occurred.

Conclusions: Faricimab provided superior visual and anatomical benefits than aflibercept, without additional safety concerns in DME eyes. These data support dual Ang-2/VEGF-A blockade as an effective, less burdensome first-line therapy and justify prospective studies to confirm long-term durability and cost-effectiveness.

Abstract No.: 200726
Recurrent Central Retinal Vein Occlusion (CRVO) in an Adult Male With Methylenetetrahydrofolate Reductase (MTHFR; C677T) Mutation, Hyperhomocysteinemia, and Polycythemia

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Purpose: To report a case of recurrent CRVO in the right eye and impending CRVO in the left eye of a patient with a history of MTHFR gene mutation, hyperhomocysteinemia, polycythemia, and hypercholesterolemia, which was successfully treated with lifestyle modification, folate supplementation, antiplatelet therapy, and intravitreal injection of anti–vascular endothelial growth factor (anti-VEGF).

Methods: A case report.

Results: We present a case of recurrent CRVO in the right eye and impending CRVO in the left eye in a 31-year-old Hispanic male. The patient first presented at the age of 26 with painless visual loss in the right eye, with subsequent episodes over five years. Dilated fundus examination revealed glaucomatous optic nerve changes, optociliary shunt vessels, diffuse hemorrhages in the right eye, and tortuous vessels in both eyes. Further work-up showed a high serum titer of homocysteine and cholesterol, mildly elevated hemoglobin, and heterozygous MTHFR (C677T) mutation. The patient was treated with aspirin, vitamin supplementation with folate, lifestyle modification, and intravitreal injection of anti-VEGF, achieving visual acuity of 20/20 in both eyes on subsequent follow-up consultations.

Conclusions: The index study magnifies the importance of comprehensive evaluations for hypercoagulable states, including homocysteine levels and MTHFR mutation screening in young CRVO patients. Early detection and management can prevent recurrent episodes and reduce long-term cardiovascular risks.

Abstract No.: 200265
Regression of Neovascularization in treatment-naive Neovascular Age-Related Macular Degeneration (nAMD) Patients With Intravitreal Aflibercept Injection – An One-Year Prospective Multicenter Study

*First Author: Apurba **ADHIKARI***

Purpose: To study the effect of intravitreal aflibercept injection in treatment-naive patients with nAMD (104 eyes of 80 patients), we monitored new vessels around the macular area periodically, initially at monthly intervals followed by bi-monthly intervals for up to one year, with visual acuity being monitored concurrently.

Methods: This is a prospective multicenter study in which patients with nAMD were carefully selected. Patients with unilateral disease (for any reason) were excluded from the study. Visual acuity (logMAR) and the anatomical configuration of the macular area were assessed using OCT and OCT-A at baseline, on a monthly basis for up to three months, and bi-monthly thereafter for up to one year.

Results: Among the selected eyes, 15 patients had bilateral disease. Initially, 124 eyes of 80 patients were selected, of which 18 patients were lost to follow-up during the study. Alongside the regression of vascularization, 40 eyes improved in visual acuity from 0.8 to 0.5 logMAR, 36 eyes from 0.8 to 0.6, and 28 eyes from 0.6 to 0.3 logMAR by the endpoint of one year.

Conclusions: Intravitreal aflibercept injections administered as loading doses once a month for three months, followed by bimonthly injections on a pro re nata basis, resulted in regression of vascularization and improvements in visual acuity, both of which stabilized over a one-year period.

Abstract No.: 200696
Retinal Pigment Epithelium and Outer Retinal Atrophy (RORA) in Singaporean Octogenarians: Findings From a Population-Based Cohort

First Author: Helios Study Team
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Purpose: To investigate the prevalence and morphological characteristics of RORA in participants aged ≥80, using optical coherence tomography (OCT) and classification of atrophy meetings (CAM)–defined imaging criteria, in a population-based cohort study involving over 10,000 adults aged 30-85 years.

Methods: Participants underwent comprehensive ophthalmic assessments, including fundus photography and OCT. Only gradable OCT scans were analyzed. RORA presence was confirmed via multimodal imaging, with complete RORA (cRORA) defined by ≥250 µm of signal hypertransmission, retinal pigment epithelium attenuation/disruption, and photoreceptor loss; incomplete RORA (iRORA) met these criteria partially. Trained graders assessed B-scans for lesion size and foveal proximity.

Results: From 57 participants aged ≥80, 38 with sufficient imaging contributed 75 eyes to the final dataset. The average participant age was 81.7 ± 1.3 years (range: 80.0–84.8). Hypertransmission consistent with atrophic changes was observed in seven eyes, including one eye with myopic degeneration. Based on CAM definitions, cRORA was detected in five eyes (6.7%) and iRORA in one eye (1.3%). The mean greatest linear dimension (GLD) of cRORA lesions was 832.8 ± 306.9 µm, while the iRORA lesion measured 213 µm. The mean lesion distance to the foveal center was 1029.5 ± 668.9 µm. Lesions were anatomically located within the Early Treatment Diabetic Retinopathy Study (ETDRS) grid as follows: center (1 eye),

superior inner (2 eyes), nasal inner (2eyes), and temporal outer subfields (1 eye).

Conclusions: RORA affects nearly 8% of Singaporean octogenarians — mainly cRORA — highlighting the value of OCT-based screening and the need for longitudinal studies to guide future therapies.

Abstract No.: 200929
Safety, Tolerability, and Effectiveness of Subretinal Transplantation of Embryonic Stem Cell–Derived Retinal Pigment Epithelium (ESC-RPE) in Patients With Stargardt Disease: A Systematic Review

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Purpose: Stargardt disease is a leading cause of inherited central vision loss with no current definitive treatment. Subretinal transplantation of ESC-RPE offers a promising regenerative approach. We aim to evaluate the safety, tolerability, and effectiveness of ESC-RPE transplantation in patients with Stargardt disease, providing evidence for future therapeutic strategy considerations.

Methods: A comprehensive database search was conducted on PubMed, Scopus, EBSCO, and Google Scholar, as of July 1, 2025. We included clinical trials (CT) assessing primarily the safety and tolerability of ESC-RPE transplant, as well as its effectiveness in improving visual acuity, measured by the Early Treatment Diabetic Retinopathy Study (ETDRS) chart and vision-related quality of life. All included studies were evaluated with Cochrane Risk of Bias In Nonrandomized Studies of Interventions (ROBINS-I).

Results: A total of 5 CT with low-to-moderate risk of bias were included, encompassing 43 patients with Stargardt disease, with age ranging from 23 to 53 years old. The transplant regimen varied from using 50,000 cells to 1,000,000 cells in one study. No adverse effects related to the transplant were encountered across all studies. Three studies reported an improvement in patients' visual acuity, increasing by 6-19 ETDRS letters. Two studies found an increase in visual-related quality of life.

Conclusions: Subretinal ESC-RPE transplantation appears to be a safe and well-tolerated intervention for patients with Stargardt disease, with no transplant-related adverse events reported. Preliminary evidence suggests potential benefits in visual acuity and quality of life.

Abstract No.: 200683
Single-Center Real-World Outcomes of Faricimab Versus Aflibercept for Neovascular Age-Related Macular Degeneration (nAMD) in Taiwan

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Purpose: To compare 12-month functional, anatomical, and safety outcomes of intravitreal faricimab versus aflibercept in treatment-naïve nAMD eyes managed under routine care at a tertiary center in Taiwan.

Methods: Consecutive nAMD eyes starting faricimab (6 mg) or aflibercept (2 mg) from January 2024 to June 2025 were retrospectively reviewed; all completed ≥12 months of follow-up. Faricimab received four monthly doses, an 8-week interval shot, then 4–16 week treat-and-extend (T&E); aflibercept followed the center's usual T&E. Primary endpoints were 12-month changes in best-corrected visual acuity (BCVA) (logMAR), central subfield thickness (CST), and fluid-free status; secondary endpoints were secondary epiretinal membrane (ERM) and ocular adverse events (AEs).

Results: A total of 108 faricimab-treated and 136 aflibercept-treated eyes had comparable baseline BCVA (0.48 ± 0.26 vs. 0.50 ± 0.28 logMAR) and CST (378.5 ± 92.8 vs. 383.6 ± 95.1 μm). At month 12, faricimab eyes showed a greater improvement in BCVA (-0.16 ± 0.17 vs. -0.10 ± 0.16 logMAR; P = 0.04) and a larger CST reduction (-95.21 ± 87.6 vs. -78 ± 98.5 μm; P = 0.05). Fluid-free status was achieved in

48.92 % versus 41.61 % (P = 0.03). Secondary ERM occurred in 2.3 % and 7.45 % (ns), and ocular AEs was with no intraocular inflammation or endophthalmitis.

Conclusions: In real-world Taiwanese practice, faricimab provided superior visual acuity improvement, greater macular drying, and lower secondary ERM formation than aflibercept over 12 months. Dual angiopoietin-2/vascular endothelial growth factor A blockade appears to be an effective first-line option for nAMD, meriting long-term prospective evaluation.

Abstract No.: 201208
Subthreshold Micro-Pulse Yellow Laser Photocoagulation (577-nm) for Chronic Central Serous Chorioretinopathy (CSCR)

*First Author: Anand **RAJENDRAN***
*Co-Author(s): Bansari **SORATHIYA***

Purpose: To evaluate the short-term outcome of subthreshold micropulse yellow laser photocoagulation in treating CSCR.

Methods: A retrospective case series was conducted from May 2024 to July 2025 at an eye hospital. A total of 17 eyes of 15 patients with chronic or chronic recurrent CSCR were treated with subthreshold micropulse yellow laser (5% duty cycle, 50% reduced energy from micropulse test burn, 200 ms exposure time, 100 µm spot size). Patients were followed for at least four months post-treatment.

Results: The mean age was 45.06 years. The mean follow-up period post-treatment was 6 ± 4.88 months. Baseline best-corrected visual acuity (BCVA) was 0.35 ± 0.26 logMAR, improving to 0.18 ± 0.13 logMAR (P = 0.0056) at two months and 0.13 ± 0.14 logMAR (P = 0.0026) at final follow-up. Central macular thickness (CMT) reduced from 420.82 ± 216.57 µm at baseline to 258.3 ± 69.75 µm (P = 0.0075) at two months and 263.35 ± 92.47 µm (P = 0.015) at final visit.

Conclusions: Subthreshold micropulse yellow laser therapy has shown promising short-term results in treating chronic CSCR without causing retinal damage. However, to better understand its effectiveness and safety, larger prospective, randomized, and comparative studies are needed.

Abstract No.: 201027
The Choroideremia Conundrum – Varied Phenotypic Characteristics of Choroideremia in an Indian Cohort

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Purpose: To study phenotypic characteristics of choroideremia in an Indian cohort.

Methods: A retrospective study of 50 clinically diagnosed choroideremia patients. A detailed history, clinical exam, retinal imaging, and electrophysiological tests were done.

Results: A total of 44 patients were male and 6 were female, aged 18-73 years. Twelve had a family history of consanguinity. The most common complaint was nyctalopia, followed by tubular vision. Visual acuity varied from hand motion/counting finger (HMCTF) to 6/6. Myopia was the most common refractive error. Posterior subcapsular cataract was seen in six patients. Fundus exam showed diffuse choroid atrophy sparing the fovea and mid-peripheral pigment clumps. Foveal atrophy was seen in eight cases. Atypical features such as punched-out retinal pigment epithelium (RPE) atrophy at the fovea were seen in two and choroidal neovascular membrane (CNVM) in one case. Optical coherence tomography showed parafoveal outer retinal, RPE thinning, choroid atrophy, and CNVM in one case. Fundus fluorescein angiography showed autofluorescence loss corresponding to atrophy. Full-field electroretinogram showed undetectable scotopic and photopic responses in advanced cases.

Conclusions: The study contributes to the existing knowledge by describing the phenotypic features of relatively less common inherited retinal diseases, such as choroideremia. These patients can further be referred for genetic counseling and potential selection in future gene and cell therapy trials.

Abstract No.: 201025
The Funduscopy Hurdle: Delays and Associated Risk Factors in Initiating Antiretroviral Therapy for Human Immunodeficiency Virus (HIV) Patients in the Philippines

First Author: Jonnel ***POBLETE***
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Purpose: In resource-limited settings, institutional policies often require pre-antiretroviral therapy (ART) funduscopy to screen for infections-like cytomegalovirus (CMV) retinitis and prevent immune reconstitution inflammatory syndrome. However, the systemic delays from this mandate are understudied in resource-limited settings. This study quantified these delays and identified associated risk factors at a Philippine tertiary hospital.

Methods: This mixed-methods study at a tertiary referral hospital analyzed records of 156 adult, treatment-naïve HIV patients (2020-2023) and conducted structured interviews. We measured time from diagnosis to ART initiation and used multivariable logistic regression to identify associated risk factors for delay.

Results: Requiring pretreatment funduscopy significantly prolonged mean ART initiation delay (11.86 vs. 9.71 weeks; $P < 0.0001$) and independently increased odds of delay 2.6-fold (95% confidence interval [CI]: 1.1-6.4, $P = 0.042$). Socioeconomic barriers such as actual distance (odds ratio [OR] = 1.4, 95% CI: 1.2,1.8, $P = 0.011$), perceived distance (OR = 2.3, 95% CI: 1.1, 3.6, $P = 0.024$), and financial concerns (OR = 1.9, 95% CI: 1.3–2.7, $P = 0.015$) were also powerful predictors. Notably, the mandatory screening had a low diagnostic yield; CMV retinitis was found in only 1.06% of patients.

Conclusions: As the first Philippine study documenting these specific barriers, our findings show that a mandatory screening policy is a significant driver of ART delays, compounded by socioeconomic factors. The policy's low diagnostic yield further challenges a uniform protocol. Optimizing HIV outcomes, therefore, requires a dual approach: refining clinical protocols toward risk-stratification and strengthening socioeconomic support systems to overcome patient barriers.

Abstract No.: 200224
The Implementation of Artificial Intelligence–Driven Diabetic Retinopathy Screening (AI-DRS) in a District Hospital in Myanmar: A Pilot Study

First Author: Mya ***SOE***

Purpose: Diabetic retinopathy (DR) causes irreversible blindness. Early detection and timely treatment can prevent blindness. However, manpower and access to DR screening are challenging in remote areas. This study aims to validate and assess the acceptability of AI-DRS versus standard care (SC) with slit-lamp examination.

Methods: All patients underwent a mydriatic two-field fundus photography, automatically analyzed by the AI and a dilated clinical fundus examination by a consultant ophthalmologist, blinded to the AI-DRS results. The primary outcome measure was the agreement between AI-DRS (Singapore Eye Lesion Analyzer [SELENA+] performed with a portable fundus camera) and SC, measured by sensitivity, specificity and kappa indices. Questionnaires were administered to test the acceptability of AI-DRS.

Results: 414 eyes of 207 patients (mean age 60.13, standard deviation [SD] = 9.39), male (20.3%) and female (79.7%) were screened. AI-DRS versus SC had a sensitivity of 85% and specificity of 100% with high agreement (kappa value 0.915 [$P < 0.001$]). Comparing AI-DRS to SC, 350 versus 362 eyes had no DR/mild DR, 6 versus 7 eyes had moderate/severe non-proliferative DR (NPDR), 6 versus 7 had proliferative DR (PDR). AI-DRS had more ungradable eyes versus SC (52 versus 39 eyes). Questionnaires showed 98.6% of patients found AI-DRS acceptable.

Conclusions: The AI-DRS is a valid method of DR screening in suburban Myanmar populations with high rates of acceptability. It may improve

access and coverage of DR screening services in Myanmar and other similar settings.

Abstract No.: 201181
The Role of RUNX3-ENO1 in Regulating Glycolysis of Vascular Endothelial Cells in Hypoxia-Induced Retinal Neovascularization (RNV)

*First Author: Xiaoling **LIANG***
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Purpose: This study aims to explore the mechanism by which RUNX3 regulates the activity of α-enolase (ENO1) and thereby affects the glycolysis level of vascular endothelial cells, as well as its role in hypoxia-induced RNV. .

Methods: An oxygen-induced retinopathy (OIR) model was established and treated with the ENO1 inhibitor ENOblock. Immunofluorescence (IF) was used to assess the formation of RNV. CCK-8, EdU, scratch, and tube formation assays were used to evaluate the effects of ENOblock. Enzyme activity assays, nuclear-cytoplasmic protein separation, and Co-IP were conducted to analyze the interaction between RUNX3 and ENO1.

Results: IF showed that ENOblock (10 μM) treatment significantly reduced the area of RNV in OIR mice, decreased the number of ki67+ vascular endothelial cells and iba1+ microglia. Molecular experiments indicated that ENOblock induced an increase in nuclear expression. ChIP experiments suggested that ENO1 interacted with Cox2 promoter and inhibiting its expression, thereby suppressing retinal inflammation and neovascularization. CoIP experiments indicated that RUNX3 bound to ENO1 under normoxia, promoting ENO1 nuclear entry. The binding ability of RUNX3 to ENO1 decreased and glycolytic activity is enhanced by free ENO1, promoting the formation of RNV.

Conclusions: ENO1, as a classic glycolytic enzyme, promotes hypoxia-induced RNV. ENOblock can inhibit the formation of RNV in OIR mice and suppress the proliferation, migration, and tube formation of HUVECs induced by hypoxia. The mechanism may be that it promotes the binding of RUNX3 to ENO1 and promotes ENO1 nuclear entry, exerting a transcriptional inhibitory effect on Cox2, thereby inhibiting retinal inflammation and inflammatory neovascularization.

Abstract No.: 200248
Therapeutic Peritoneal Dialysis Adjustment in a Pediatric Patient With Bilateral Serous Retinal Detachment Associated With End-Stage Renal Disease Secondary to Bilateral Renal Hypoplasia

*First Author: Ricardo **PAPA***
*Co-Author(s): Huey **JAVIER***

Purpose: This case report describes the first documentation in literature, which details specific therapeutic adjustments to dialysis settings to address bilateral exudative retinal detachment in a patient with end-stage renal disease.

Methods: An 11-year-old male with a medical history of end-stage renal disease secondary to congenital renal hypoplasia was referred due to sudden bilateral blurring of vision. Examination included visual acuity testing, dilated fundus examination, and optical coherence tomography (OCT). Systemic work-up was reviewed to investigate potential systemic causes. In addition, a thorough review of the hospital course was done to further examine contributing factors. The patient was referred to the pediatric nephrology department for peritoneal dialysis adjustment based on the findings.

Results: The patient had best-corrected visual acuity of hand movement with good light perception for both eyes. Fundus examination revealed bilateral serous retinal detachment with macular involvement. OCT confirmed serous retinal detachment with the presence of hyperreflective densities scattered all over the retina. A plausible correlation with peritoneal dialysis was suspected due to the onset of blurring of vision, coinciding with the abrupt adjustment of the peritoneal dialysis regimen. Following adjustments, the patient's visual acuity improved to 20/30 bilaterally over

the course of the hospital stay with gradual resolution of neurosensory detachment on OCT.

Conclusions: This case highlighted the early recognition of the association between peritoneal dialysis and exudative retinal detachment. Prompt evaluation and collaborative subspecialty therapeutic adjustments addressed the condition and mitigated associated ocular risks.

Abstract No.: 201099
Treatment Outcomes of Switching to Aflibercept 8 mg in Refractory Neovascular Age-Related Macular Degeneration (nAMD)

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Purpose: To evaluate outcomes of switching to aflibercept 8 mg in eyes with nAMD previously treated with anti–vascular endothelial growth factor (VEGF) agents.

Methods: This multicenter retrospective study examined six-month treatment outcomes in eyes with nAMD previously treated and switched to aflibercept 8 mg. Data including best-corrected visual acuity (BCVA), number of previous injections, and treatment intervals were collected. Central retinal thickness (CRT), subfoveal choroidal thickness (SFCT), and maximal pigment epithelial detachment (PED) height were measured on optical coherence tomography images.

Results: Analysis included 121 eyes (117 patients). Mean number of previous anti-VEGF injections was 39.8 ± 29.3; mean pre-switch interval was 5.8 ± 1.9 weeks. At six months, 71 eyes (59%) continued aflibercept 8 mg, and 50 (41%) discontinued due to worsening at intervals ≥8 weeks. The discontinued group had significantly shorter pre-switch intervals (4.7 ± 1.1 vs. 6.6 ± 1.9 weeks, $P < 0.01$) and thinner SFCT compared to the continued group (168 ± 88 vs. 206 ± 90 µm, $P = 0.012$). At six months, CRT and PED decreased from 282 ± 105 to 250 ± 83 µm ($P = 0.015$) and from 235 ± 189 to 201 ± 166 µm ($P = 0.007$). BCVA was maintained (0.18 ± 0.22 to 0.16 ± 0.23, $P = 0.426$). The mean increase in injection interval was 2.3 ± 2.5 weeks in continued eyes.

Conclusions: Switching to aflibercept 8 mg may be an option to extend injection intervals, leading to a reduction in treatment burden.

Abstract No.: 200907
VERDANT Phase II trial: Evaluating BI771716 Versus Active Comparator in Geographic Atrophy (GA) Secondary to Age-Related Macular Degeneration (AMD)

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Purpose: AMD, a leading cause of legal blindness, can progress to GA, resulting in irreversible vision loss. The two approved intravitreal treatments for GA show modest efficacy. BI771716 is a highly specific antibody fragment, possibly enabling optimized penetration through all retinal layers to the most critical target site, driving GA disease pathology. In the Phase I trial, BI771716 met the primary safety endpoint.

Methods: Up to 180 participants will be recruited from the US and randomized 1:1:1 to one of two BI771716 regimens intravitreally over 48 weeks or pegcetacoplan. Participants must have a diagnosis of GA secondary to AMD, with a total GA lesion area of ≥2.5 mm^2 and ≤17.5 mm^2, measured by fundus autofluorescence (FAF). Participants will have a best-corrected visual acuity (BCVA) letter score of ≥24 letters using the Early Trial Diabetic Retinopathy Study (ETDRS) chart in the study eye. Primary endpoint is the slope of change from baseline in square root–transformed GA area, measured by FAF over 56 weeks. Secondary functional endpoints

include change from baseline in BCVA, and occurrence of BCVA score reduction of ≥15 letters for ≥2 consecutive visits, both measured by standardized ETDRS chart. Secondary safety endpoints include the development of exudative neovascular AMD and drug-related adverse events. Further endpoints include microperimetry parameters and ellipsoid zone attenuation parameters, and other biomarker and functional parameters.

Results: Ongoing and not yet available.

Conclusions: BI771716 may have the potential to achieve a greater reduction of GA progression compared to available treatments, given its better penetration through Bruch membrane.

Abstract No.: 200718
"Silent But deadly": Unilateral Central Retinal Artery Occlusion (CRAO) as the Presenting Manifestation of Systemic Lupus Erythematosus (SLE)

First Author: Aillen Eleizer ***ABINES***
Co-Author(s): Andreana Dominique Marija ***MILLA***

Purpose: This paper describes a case of a patient with SLE who presented with unilateral CRAO as the presenting clinical manifestation.

Methods: A medical record review to obtain relevant case information and a review of related literature were done.

Results: CRAO is a rare presenting clinical manifestation of SLE. The patient did not have any outright signs which suggested SLE. It was only after her episode of painless loss of vision that SLE was considered. Diagnostics were ordered which revealed high antinuclear antibody (ANA) titers, elevated erythrocyte sedimentation rate, lymphopenia, and proteinuria. She also had small acute nonhemorrhagic infarcts seen on plain cranial magnetic resonance imaging (MRI) and evidence of inflammatory change of the left ophthalmic artery on orbital MRI with contrast. This constellation of signs and symptoms is what supported the diagnosis of SLE in the patient.

Conclusions: SLE should be considered in patients who present with CRAO. Given that CRAO has a strong association with systemic inflammatory activity, systemic treatment for SLE must be started as soon as possible. There are no guidelines as of yet with regard to the treatment of CRAO in patients with SLE. Prompt recognition and treatment of CRAO is the primary determining factor in the visual prognosis of patients.

Retina (Surgical)

Abstract No.: 201138
"Little Eyes, Big Clues ": Unusual Presentation of a Pediatric Endophthalmitis

First Author: Archana ***RAJAMANI***
Co-Author(s): Arathi ***ANAND****, Prabu* ***BASKARAN****, Anand* ***RAJENDRAN***

Purpose: To highlight the diagnostic and therapeutic challenges of pediatric endophthalmitis through two atypical presentations, emphasizing the importance of early recognition, tailored management, and the role of vitrectomy in visual preservation.

Methods: In this case series, two pediatric patients with unusual presentations of endophthalmitis were selected from the outpatient department at a tertiary eye care center. Case 1 involved an eight-year-old male who developed fulminant endophthalmitis following a YAG capsulotomy, likely aggravated by retained suture. Case 2 describes a 14-year-old boy presenting with features mimicking frosted branch angiitis and panuveitis post-blunt trauma. Both patients underwent detailed evaluation and relevant investigations and were managed as per institutional protocol.

Results: In Case 1, Streptococcus pneumoniae was identified as the causative agent. Despite aggressive surgical intervention including therapeutic keratoplasty, intraocular lens explantation, core vitrectomy, and intravitreal antibiotics, visual acuity improved from hand movements to 6/36. In Case 2, initially presented as Idiopathic frosted branch angiitis, later found to have peripheral retinitis.

Polymerase chain reaction (PCR) and cultures were negative, and a presumptive infectious etiology was treated with antivirals and systemic steroids. Visual acuity improved from 6/36 to 6/18 over two weeks.

Conclusions: Pediatric endophthalmitis often presents atypically and may masquerade as inflammatory or vascular conditions. Delayed diagnosis is common due to vague symptoms and communication barriers. Early and complete vitrectomy, in conjunction with targeted antimicrobial therapy, is crucial in managing severe cases. Surgeons must be cautious even with noninvasive procedures such as YAG capsulotomy, especially in children with prior ocular surgery.

Abstract No.: 201335
A Case of Submacular Hemorrhage Secondary to Polypoidal Choroidal Vasculopathy (PCV) in a Functionally Only-Eyed Patient

*First Author: Jayson **SO***
*Co-Author(s): Joseph Anthony **CHANG**, Jocelyn **SY***

Purpose: To present a case of PCV in a functionally only-eyed patient, successfully managed with pneumatic displacement, anti–vascular endothelial growth factor therapy, and focal laser.

Methods: A case report.

Results: A 50-year-old female, a known case of Peter's anomaly in the right eye with poor light projection, presented with a day history of sudden-onset blurring of vision in her left eye following an episode of forceful sneezing during an allergic rhinitis flare. Best-corrected visual acuity (BCVA) of the left eye at the time of presentation was 20/160. Fundus examination revealed submacular hemorrhage, and further evaluation with optical coherence tomography (OCT) demonstrated sharp-peaked pigment epithelial detachment and double-layer sign consistent with PCV. Pneumatic displacement with C3F8 gas, along with intravitreal injection of bevacizumab, was performed at the time of consultation, resulting in improvement of BCVA to 20/80 one day postoperatively. The patient was then given three additional intravitreal bevacizumab injections. After the fourth dose of bevacizumab, still a note of hemorrhage, thus fluorescein angiography–indocyanine green angiography–guided focal laser was done. On the latest follow-up, the submacular hemorrhage resolved, and the patient's BCVA was 20/30 in the left eye.

Conclusions: In cases of only-eyed patients, aggressive and timely interventions must be done to prevent visual disability and complete blindness. This case highlights the importance of preserving vision in the remaining seeing eye and highlights PCV as a potential etiology for acute submacular bleeding in middle-aged adults.

Abstract No.: 201360
A Case of Traumatic Submacular Hemorrhage Secondary to Choroidal Rupture Managed With Pneumatic Displacement

*First Author: Jubaida **AQUINO***
*Co-Author(s): Joseph Anthony **CHANG**, Jayson **SO***

Purpose: To report a case of traumatic submacular hemorrhage secondary to choroidal rupture, managed with pneumatic displacement using C3F8 gas.

Methods: A case report.

Results: A 42-year-old male presented with immediate blurring of vision in the left eye after being struck by a wooden plank. Best-corrected visual acuity (BCVA) was 20/160. Funduscopy revealed submacular hemorrhage located 1.5 disc diameters superotemporal to the fovea. Hypopigmented curvilinear whitish lines concentric to the optic nerve were also noted near the macula. Optical coherence tomography confirmed the presence of a choroidal rupture. Although the ideal management would have included pneumatic displacement with intravitreal tissue plasminogen activator (tPA), financial constraints precluded its use. The patient underwent pneumatic displacement with C3F8 gas alone, one day post-injury. On postoperative

day one, BCVA improved to 20/120. At one-week follow-up, the retina remained attached with no choroidal detachment. Still with minimal hemorrhage, but BCVA had improved significantly to 20/40.

Conclusions: This case highlights the potential for favorable visual outcomes in traumatic submacular hemorrhage secondary to choroidal rupture, even when managed with pneumatic displacement alone. Early intervention within 24-48 hours of trauma played a key role in visual recovery. While tPA remains the standard adjunct in such cases, this case demonstrates that significant improvement may still be achieved with gas tamponade alone in resource-limited settings.

Abstract No.: 200968
A Comparative Analysis of Outcomes Between Membrane Peeling Under Silicone Oil (MPSO) Versus Membrane Peeling After Silicone Oil Removal (MPSOR)

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Purpose: To compare the anatomical and visual outcomes between MPSO (Group 1) and MPSOR (Group 2).

Methods: Group 1 (37 eyes) underwent MPSO with oil top-up and Group 2 (37 eyes) MPSOR and silicone oil reinjection. For Group 1, all steps, including membrane removal, subretinal fluid drainage, retinotomies, retinectomies, perfluorocarbon liquid injection, and endolaser, were done under silicone oil, followed by SO top-up. In Group 2, the above steps were done as necessitated, after complete SOR followed by reinjection of SO. Preoperative and postoperative visual acuity, intraocular pressure, and retinal attachment status were recorded at one week and one, three, and six months.

Results: The study included 74 eyes of 74 patients (37 eyes in each group) with recurrent retinal detachment with SO in situ from January 2023 to October 2024. The mean number of previous reattachment procedures was 2.92 +/- 0.95 in Group 1 and 2.84 +/- 0.76 in Group 2. Both groups showed comparable visual outcomes (P = 0.095) and rates of redetachment at all time points in follow-up (P = 1). Group 1 showed a significantly lower rate of retinectomies (P = 0.0003).

Conclusions: SO, by virtue of its mechanical properties, provides a tamponade that provides a safe countertraction to the pulling manoeuvres of membrane peeling. For anatomical reattachment, in eyes that have undergone more than two previous surgeries, such as in our study, MPSO can be less time-consuming, avoid extensive retinectomies, and achieve comparable visual outcomes and macular reattachments to the conventionally performed MPSOR.

Abstract No.: 200688
A Novel Clinically Applicable Pear Flower Petal–Shaped Inverted Internal Limiting Membrane (ILM) Flap Technique for Treating Full-Thickness Macular Hole (FTMH) With Epiretinal Proliferation (EP)

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*Co-Author(s): Yan **CHENG**, Han **SUN**, Hong **WU**, Xiaomeng **ZHANG***

Purpose: Building upon the previously developed pear flower petal–shaped inverted ILM flap technique, this study further investigates its clinical applicability and potential advantages in treating FTMH associated with EP.

Methods: EP-FTMH was treated using pars plana vitrectomy (PPV) combined with the double-inverted EP and ILM flap technique (surgical video available). EP was lifted and preserved in a petal-like shape after the first indocyanine green (ICG) staining. A second ICG staining exposed the underlying ILM, which was similarly fashioned into multiple flaps. Both EP and ILM flaps were trimmed and inverted to cover the hole, followed by air tamponade. Preoperative FTMH indices and postoperative best-corrected visual acuity (BCVA) were recorded. Outer retinal microstructures, particularly the external limiting membrane

(ELM) and ellipsoid zone (EZ), were assessed using optical coherence tomography.

Results: The macular hole closed anatomically, with BCVA improving from finger counting to 32/200. By two months, ELM and EZ defect lengths had decreased by 20% and 52% from early postoperative measurements, respectively. The petal-shaped flaps remained stable, and no intraoperative or postoperative complications were observed.

Conclusions: This technique offers distinct advantages, including minimal intraoperative trauma, preservation of EP to facilitate anatomical recovery, and stable coverage. Its simplicity, flexibility, and precision make it well-suited for complex cases where ILM or EP is challenging to identify, peel or susceptible to tearing. These features support its potential as a safe, effective, and broadly applicable strategy for treating EP-FTMH.

Abstract No.: 200805
Amniotic Membrane Graft for Macular Hole Closure

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Purpose: Macular holes were first described late in the 19th century, with viable treatments becoming available late in the 20th century. The insertion of human amniotic membrane (hAM) has shown promise for large holes.

Methods: A review of all eyes in which hAM was inserted for a macula hole at one center from October 2023 until May 2025.

Results: A total of 26 eyes from 23 patients underwent hAM insertion, with 80% performed by one surgeon. The mean age was 64.6 years, with 65% being female. Indications were refractory macular hole surgery in 19 eyes (73.08%) and primary repair in 7 eyes (26.92%). The mean minimum linear diameter (MLD) was 696.5 ± 202.5 µm, the mean base diameter was 1215.3 ± 516.3 µm, and the mean macular hole index (MHI) was 0.37 ± 0.11. When focusing on its use in refractory cases, gas tamponade was used for all, with an anatomical closure achieved in 84.21%, increasing to 100% with one further surgery. The common postoperative complications were nonclosure and a transiently elevated intraocular pressure, 15.79% each. Preoperatively, 73.68% had a logMAR acuity of worse than 0.7, and at the final follow-up, 10 eyes (52.63%) achieved an acuity of 0.7 or better. Nine eyes (42.10%) improved by ≥2 lines, nine eyes (47.37%) remained stable, and two eyes (10.52%) worsened by ≥2 lines.

Conclusions: This centre experience highlights that hAM is a useful tool allowing for anatomical closure in refractory cases. It is also promising to note that there is an improvement in Snellen acuity even over our relatively short timeframe.

Abstract No.: 201093
Anatomical and Functional Outcomes of Vitrectomy for Secondary Macular Holes

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Purpose: To evaluate the anatomical and functional outcomes of vitrectomy for secondary macular holes (excluding trauma and high myopia).

Methods: This retrospective observational study included all eyes with secondary macular holes that underwent vitrectomy at a tertiary eye care centre in North India. Macular holes secondary to trauma and high myopia were excluded. In addition to patient demographics, preoperative and postoperative best-corrected visual acuity (BCVA), macular hole diameter, etiology, type of surgical approach, and anatomical closure were assessed. Follow-up duration and incidence of second surgeries and postoperative complications were also recorded.

Results: A total of 28 eyes of 27 patients with mean age of 35 years were included in the study. The most common underlying causes were retinal degenerative (retinitis pigmentosa, x-linked retinoschisis, familial exudative vitreoretinopathy), retinal vascular (proliferative diabetic retinopathy, Coats disease, retinal vasculitis, venous occlusion,

retinopathy of prematurity), and others (intravitreal cysticercosis, choroidal coloboma, circumscribed choroidal haemangioma, etc). The mean macular hole diameter was 733 microns. The mean preoperative BCVA improved from 0.15 to 0.33 (Snellen fraction) postoperatively at three months.. Most patients underwent the inverted flap technique and achieved type 1 closure. Three eyes required a second surgery. Postoperatively, Retinal pigment epithelium atrophy and outer retinal lucency were noted in eight eyes, which were the main factors limiting the visual outcome.

Conclusions: Most secondary macular holes present with poorer visual acuity and are larger at presentation. While these close after vitrectomy and result in modest visual gain, the health of the underlying retinal pigment epithelium is a major visual-limiting factor.

Abstract No.: 201142
Anatomical and Visual Outcomes of the Use of Medium-Term Perfluoro-n-octane (PFO) in Complicated Retinal Detachment (RD): A Three-Year Single surgeon Retrospective Study

*First Author: Kavya **TEEGALA***

Purpose: To evaluate the anatomical and visual outcomes of using medium-term PFO tamponade followed by secondary silicone oil (SO) exchange in cases of complicated RD.

Methods: This retrospective, electronic medical record-based observational study included 20 eyes with complex RD treated over a three-year period. All patients underwent initial pars plana vitrectomy with intraoperative perfluorocarbon liquid (PFCL) tamponade left in situ, followed by SO injection and PFCL removal after approximately two to three weeks. Demographic, surgical, and follow-up data were analyzed.

Results: The median follow-up was 10 months (range 3–32 months). At baseline, all eyes had best-corrected visual acuity (BCVA) worse than 20/200. At final follow-up, BCVA improved in 70% of eyes and remained stable in 30%. The mean duration of intraocular PFCL tamponade was 14 days. At one year, the retinal reattachment rate was 65 %. Early redetachment under PFCL occurred in four eyes, while three additional eyes redetached after SO tamponade. Two eyes required resurgery to achieve anatomical success.

Conclusions: Medium-term PFO tamponade followed by secondary SO exchange may offer favorable anatomical and visual outcomes in complex RD cases. This staged approach can help achieve favourable anatomical and visual outcomes in cases of complex RD.

Abstract No.: 200923
Application of Perfluoropropane (C3F8) Gas Combined With Subretinal Tenecteplase in Staged Surgery for Complex Ocular Trauma

*First Author: Shuai **SHENG***

Purpose: Complex open-globe injuries are ophthalmic emergencies with poor prognosis and high blindness rates. Primary repair aims to restore globe integrity for secondary intervention. This report evaluates a staged approach using C3F8 gas and subretinal tenecteplase.

Methods: A 54-year-old male presented with vision loss after an electric hammer injury. Primary repair included laceration closure, anterior chamber washout, and intravitreal injection of 1.2 ml C3F8 gas. Subsequent secondary surgery involved pars plana vitrectomy with laser photocoagulation and subretinal injection of tenecteplase to address subretinal hemorrhage. A third surgery (November 1, 2023) repaired complex retinal detachment with silicone oil injection.

Results: Two months post–final surgery, best-corrected visual acuity was 0.5, indicating favorable recovery.

Conclusions: Intravitreal C3F8 injection during primary repair effectively managed early hypotony, reduced hemorrhage, prevented corneal blood staining and extensive retinal detachment, and inhibited post-traumatic proliferation, facilitating secondary surgery. Subretinal tenecteplase administered during the

secondary procedure promoted clot dissolution within one week. This combined approach using C3F8 and tenecteplase in staged surgery improves outcomes and reduces blindness risk in complex ocular trauma.

Abstract No.: 201308
Appositional Suprachoroidal Hemorrhage (SCH) With Retinal Detachment Managed With External Drainage and Pars Plana Vitrectomy

*First Author: Ronaldo **JARIN***
*Co-Author(s): Maria Christine **DY***

Purpose: To report a case of appositional SCH with retinal detachment secondary to complicated cataract surgery managed with external drainage and pars plana vitrectomy.

Methods: A 72-year-old hypertensive male was referred for acute intraoperative expulsive SCH of the right from phacoemulsification converted to extracapsular cataract extraction. Vision was hand movement with intraocular pressure (IOP) of 62. Iris tissue and vitreous were incarcerated in the limbal wound with a flat anterior chamber and eight-ball hyphema. Ultrasonography showed kissing hemorrhagic choroidal detachment with focal areas of retinal elevation. IOP was managed with maximum anti-glaucoma medications before subjecting the patient to surgery one week postoperation, with evidence of clot liquefaction.

Results: External drainage through posterior sclerotomies 8-9 millimeters from the limbus was done in three quadrants. Pars plana vitrectomy was also performed to release anterior adhesions and facilitate retinal detachment repair with silicone oil injection.

Conclusions: SCH is a sight-threatening intraocular complication. Intraoperative risk factors include prolonged hypotony, large incisions, vitreous loss, and Valsalva. Drainage is indicated in appositional SCH, uncontrolled IOP, and visual decline with surgery usually delayed until clot liquefaction at seven to ten days with ultrasound guidance. Pars plana vitrectomy with heavy liquids and endotamponade is also performed in cases with vitreous hemorrhage and retinal detachment. Prompt diagnosis and management will determine prognosis.

Abstract No.: 200792
Assessing Endolaser Efficiency and Ergonomics of a Novel 27-Gauge Multispot Laser Probe in a Bioniko Eye Surgical Simulation

*First Author: Vara **WUYYURU***
*Co-Author(s): Alireza **MIRSEPASSI**, Kourous **REZAEI**, Qing **XIANG***

Purpose: To evaluate the functional feasibility of a novel 27-gauge (G) laser probe in a simulated Bioniko eye surgical model, addressing prior ergonomic limitations of small-gauge vitrectomy systems.

Methods: A modified Bioniko eye model was used to simulate vitrectomy and assess a novel 27G laser probe. This model accurately mimics intraoperative conditions, including laser spot appearance and vitreous cavity visualization. A single retina surgeon performed pan-retinal photocoagulation (PRP) on 12 eyes using 27G single-spot probe (n = 6) and 27G TetraSpot probe in four-spot mode (n = 6). Laser settings mirrored surgeon's clinical use: 250–300 mW power, 200 ms pulse duration, and 400 ms interval. Total PRP time and number of laser spots were recorded. Probe ergonomics, stiffness, curvature, and laser spot and spacing were assessed.

Results: The laser probe received ergonomic assessment scores of ≥4/5 for intraocular handling, illumination, and flexibility, indicating excellent intraoperative usability. Single-spot PRP averaged 1500 spots (1443-1550 spots) over 17.7 minutes (16.8-18.9 minutes) with an average of 0.709 sec/spot. TetraSpot PRP averaged 2079 spots (1712-2600 spots) over 7.4 minutes (5.8-8.8 minutes) with an average 0.215 sec/spot, demonstrating a 3.3-fold increase in delivery efficiency.

Conclusions: This novel 27G laser probe with an improved laser delivery mode, illumination, and surgical ergonomics offers retina surgeons a valuable addition to their surgical armamentarium to treat patients. Compared

to a single-spot application, the four-spot laser application markedly shortens surgical time. This increased endolaser efficiency may potentially lead to increased surgical safety and better patient outcomes.

Abstract No.: 201131
Atypical Presentation of Bilateral Vogt-Koyanagi-Harada (VKH) Syndrome With Sub–Internal Limiting Membrane (ILM) Hemorrhage Managed by Vitrectomy and ILM Peeling

*First Author: Awaneesh **UPADHYAY***
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Purpose: To report a rare case of bilateral VKH syndrome presenting with a sub-ILM hemorrhage in one eye, an uncommon manifestation, successfully managed with vitrectomy and ILM peeling.

Methods: A 29-year-old male presented with sudden diminution of vision in the right eye (RE) for two days. Initial examination revealed RE visual acuity of 1/60, grade 1 vitritis, subhyaloid macular hemorrhage, and peripapillary neurosensory detachment (NSD); the left eye (LE) was asymptomatic with visual acuity of 6/6 and subtle ILM folds. A provisional diagnosis of inflammatory central retinal vein occlusion was made. Two days later, the patient developed blurring in the LE, which now showed vitritis, active choroiditis lesions, and NSD. Fundus fluorescein angiography revealed early pinpoint leaks, late pooling, and disc staining. A revised diagnosis of bilateral active VKH was made, and the patient was started on systemic corticosteroids

Results: One month later, inflammation had subsided in both eyes. The LE returned to 6/6 vision with resolution of choroidal lesions and NSD. The RE showed persistent sub-ILM hemorrhage with epiretinal membrane over the macula and a final visual acuity of 6/24. The patient underwent successful 25-gauge pars plana vitrectomy with ILM peeling for the sub-ILM bleed.

Conclusions: Sub-ILM hemorrhage is a rare manifestation in VKH syndrome and may mimic other diagnoses. Recognition of this atypical feature led to timely surgical intervention with good anatomical and functional recovery.

Abstract No.: 200380
Choroidal Detachment (CD) After Glaucoma Drainage Device (GDD) Implantation in a Vitrectomized Eye: Surgical Drainage and Tamponade Approach

*First Author: Ma.Christine **DY***
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Purpose: To present the clinical course, surgical management, and outcome of a CD following GDD implantation in a previously vitrectomized eye.

Methods: A 60-year-old female with primary angle-closure glaucoma (PACG) in the right eye and a history of pars plana vitrectomy for vitreomacular traction and epiretinal membrane underwent GDD implantation. Trabeculectomy was deferred due to the higher risk of failure in vitrectomized eyes, with the goal of achieving long-term, rather than immediate, intraocular pressure (IOP) control. The GDD procedure was uneventful, with stable IOP noted on postoperative day 1. However, by postoperative day 4, the patient developed extensive CD with hypotony (IOP 2 mmHg). Despite medical management, the CD progressed. On postoperative day 9, urgent surgical drainage with tube ligation was performed. Intraoperatively, widespread CD and residual preretinal membranes were noted, prompting membrane peeling and placement of C3F8 gas tamponade. By postoperative day 1 following surgical drainage, IOP improved and CD was observed. At eight weeks postdrainage, best-corrected visual acuity improved to 20/150 and IOP stabilized at 13 mmHg.

Results: This case illustrates the increased risk of severe choroidal detachment in vitrectomized eyes undergoing GDD. Surgical drainage combined with tamponade proved effective in restoring anatomical structure, improving IOP, and achieving visual recovery.

Conclusions: Early recognition and timely surgical intervention in high-risk eyes,

particularly those with prior vitrectomy, are essential for optimal outcomes. Prompt surgical drainage with tamponade in post-vitrectomy eyes may be critical in managing GDD-associated CD.

Abstract No.: 200487
Cilioretinal Artery Occlusion (CLRAO) Managed Successfully With Intraoperative Cycling Pressure Variations: A Case Report

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Purpose: To present a case of CLRAO associated with central retinal vein occlusion (CRVO), which was resolved with intraoperative cycling pressure variations.

Methods: A 76-year-old heavy smoker presented with a sudden loss of right eye vision for six hours. The relative afferent pupillary defect (RAPD) was negative, and the anterior segment was unremarkable. Funduscopy revealed blurred disc margins with engorged tortuous veins and a few nerve fibre layer hemorrhages. Retinal oedema was noted temporal to the disc involving the inferior macula. The intraocular pressure was 17 mmHg, and systemic blood pressure was normal. Ocular massaging and anterior chamber paracentesis were done immediately, suspecting CLRAO in the background of CRVO. Pars plana vitrectomy with intraoperative cycling pressure variations was induced close to the optic nerve head, in an attempt to dislodge possible emboli. In the fifth cycle, blood flow through the cilioretinal artery was observed. The patient was referred to the stroke unit for further etiological evaluation and management.

Results: At one month postoperatively, the patient's vision improved to 2/60, fundus examination revealed complete resolution of retinal edema and normal venous architecture. Fluorescein angiography demonstrated filling of the cilioretinal artery and no significant ischemia. At two months postoperatively, visual acuity improved to 6/18 with N3C2 cataract.

Conclusions: Retinal artery occlusion is an ophthalmic emergency. CLRAO associated with CRVO is a distinct clinical entity with rare occurrence. Though CLRAO is due to the increase in intraluminal pressure secondary to CRVO, a coexisting thromboembolic phenomenon cannot be ruled out. As there are no evidence-based therapies to improve visual outcome in CLRAO, intraoperative cycling pressure variations may be beneficial in selected cases.

Abstract No.: 200244
Clinical Outcomes of Direct Endoilluminator-Assisted Surgery (DEAS) for Retinal Detachments

First Author: Ratnesh ***SHARMA***
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Purpose: To report the long-term results of the modified scleral buckling technique using a 23/25-gauge endoilluminator and a widefield viewing system to overcome the limitations of conventional indirect ophthalmoscope-assisted and chandelier-assisted scleral buckling surgery.

Methods: This is an interventional, prospective, noncomparative case series. Consecutive patients listed for scleral buckle surgery for rhegmatogenous retinal detachment were enrolled. The study involved 32 patients with a minimum follow-up period of six months. Scleral buckling surgery was performed using a 23/25-gauge endoillumination probe, which was inserted through a pars plana port diagonally opposite the area with a retinal break. The primary outcome measure was the anatomical success rate assessed at six months after one surgery, with the final best-corrected visual acuity (BCVA) as a secondary outcome measure.

Results: At six months, anatomical success with one surgery was achieved in 29 patients (92%). Three patients required two additional vitreoretinal surgeries. All patients had well-attached retina at the end of the study period. The mean BCVA improved by six Early Treatment Diabetic Retinopathy Study (ETDRS) lines, from 1.02 ± 0.8 logMAR (20/200)

preoperatively to 0.40 ± 0.47 logMAR (20/50) at one year. No entry site breaks were detected where the endoilluminator light probe was inserted.

Conclusions: DEAS in application for modified scleral buckling combined with a noncontact wide-angle viewing system can provide good anatomical and functional outcomes with better simplified ergonomics and with the added advantage of an oversimplified teaching method to beginners.

Abstract No.: 200343
Clinical Outcomes of Four-Flanged Intrascleral Fixation Using Extended-Depth-of-Focus (EDOF) Intraocular Lenses (IOLs): A Case Series

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Purpose: To report a case series of five patients undergoing four-flanged sutureless intrascleral fixation of EDOF IOLs, highlighting postoperative outcomes, lens stability, and visual outcomes.

Methods: The four-flanged intrascleral fixation is an advanced sutureless technique used to stabilize IOLs. It is an adaptation of the Canabrava and Yamane techniques that improves lens positioning by securing the haptics at four points using 6/0 polypropylene sutures. In this method, a standard phacoemulsification incision is used for the IOL insertion. A 6/0 polypropylene suture is inserted transclerally with a 30-gauge needle and threaded through two of the four closed-loop haptics of the IOL, externalized and cauterized to form flanges. This is repeated for the other two haptics, which anchor the IOL securely in place.

Results: This case series highlights the advantages of combining the four-flanged intrascleral fixation technique with EDOF IOLs. It also enables toric IOL implantation via orientation of the suture flange placements and demonstrates good IOL stability and centration in eyes with poor capsular support, thus maintaining optical performance. An EDOF IOL is preferred over a multifocal IOL in these cases because its wider central refractive zone is more tolerant of decentration, a common risk with scleral-fixated IOLs.

Conclusions: This case series shows that four-flanged intrascleral fixation of EDOF IOLs is a safe, effective method for restoring quality vision in complex cataracts. The approach gives good results and may help patients, especially younger ones, regain near-normal vision.

Abstract No.: 200697
Clinical Profile, Management Trends, and Visual Outcomes of Ocular Trauma With Posterior Segment Injuries in a Tertiary Referral Center in the Philippines

*First Author: Elaine Marie **TAN***

Purpose: To describe the clinical profile, management trends, and visual outcomes of ocular trauma patients with posterior segment injuries in a tertiary referral center in the Philippines.

Methods: A retrospective, single-center chart review of 35 patient records from March 2018 to February 2024 was conducted. All eligible cases of open- and closed-globe injuries, defined by the Birmingham Eye Trauma Terminology classification system, were included. Data about demographics, clinical characteristics, management, and outcomes were collected.

Results: This study included 35 patients with a mean age of 36.7 ± 16.9 years. Penetrating trauma (49%) was the most common form of injury, occurring mainly in the workplace (51.43%). The most common posterior segment findings were vitreous hemorrhage (60%), retinal detachment (20%), intraocular foreign body (14.29%), and endophthalmitis (14.29%). B-scan ultrasonography (57.14%) was the most frequently used imaging modality. Eleven patients (31.43%) were medically treated, while the rest (24, 68.57%) required surgical intervention. Primary repair of ocular laceration (19, 54.29%), pars plana vitrectomy (14, 40%), and lensectomy/phacoemulsification

(12, 33.29%) were the most common surgical procedures. On follow-up, two patients had secondary glaucoma, and one had corneal decompensation.

Conclusions: Ocular trauma in the workplace is a significant cause of ocular morbidity in developing countries due to its impact on the patient's productivity and quality of life. Both private and government agencies must prioritize promoting awareness, developing effective preventive strategies, and strengthening policies for eye protection and safety. Ophthalmologists must likewise be aware of their essential role in the prevention and management of ocular trauma.

Abstract No.: 200675
Combined Temporary Keratoprosthesis (TKP) and Penetrating Keratoplasty (PK) in Complex Vitreoretinal Cases: A Retrospective Evaluation

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Purpose: To evaluate the anatomical and visual outcomes of TKP-assisted vitreoretinal surgery combined with PK in eyes with coexisting corneal and retinal pathology.

Methods: A retrospective review was conducted for all patients who underwent combined TKP-assisted vitreoretinal surgery and PK at a tertiary eye care center. Baseline parameters, intraoperative findings, and follow-up results were noted.

Results: The indications for surgery included failed corneal graft with retinal detachment (n = 2), corneal decompensation and central corneal scarring with nucleus drop (n = 1), corneal decompensation and central corneal scarring with intraocular lens (IOL) drop (n = 2), and perforated corneal ulcer with endophthalmitis (n = 1). All patients presented with preoperative visual acuity limited to hand movements close to the face. Intraoperatively, all six cases demonstrated stable intraocular pressure and globe stability, allowing for adequate visualisation of the peripheral retina to perform vitrectomy and endolaser. Macular visualization was sufficient for internal limiting membrane (ILM) peeling in two out of six cases. Scleral-fixated IOL implantation was performed in two patients during the same sitting. Postoperatively, five out of six patients achieved a best-corrected visual acuity of better than 6/60.

Conclusions: Corneal opacity in the setting of posterior segment pathologies may limit interventions. TKP offers excellent intraoperative visualization, enabling safe and effective posterior segment surgery in the presence of corneal opacity. PK combined with TKP-assisted vitreoretinal surgery can provide good anatomical and visual outcomes.

Abstract No.: 200788
Comparative Assessment of Traction Force in Current-Generation Versus Next-Generation Vitrectomy Systems (25Ga)

*First Author: Vara **WUYYURU***
*Co-Author(s): Steve **CHARLES**, Brian **MCDONELL**, Ying **ZHU***

Purpose: To compare the traction force and flow profile between the Constellation system in vacuum mode using 25 Ga Hypervit probes at 20,000 cuts per minute (CPM) and the Unity vitreoretinal cataract system (VCS) in flow mode using 25 Ga Hypervit probes at 30,000 CPM.

Methods: Nine of each probe type were evaluated in a simulated vitrectomy setup. Flow-matched parameters were established for the Constellation vacuum mode (350 mmHg) and Unity VCS flow mode (4 cc/min). Bovine vitreous samples (n = 30) were suspended in a balanced salt solution (BSS)–filled glass chamber, attached to a force sensor. An aspirating probe advanced from the opposite end toward the sensor. Traction force, flow rate, and probe position were recorded for analysis.

Results: 65% of the Unity flow rates concentrated between 1.8 and 5.1 cc/min, whereas Constellation spanned a broader range of 1.2-8.6 cc/min. Forces less than 0.5 mN, indicative of pure BSS aspiration, were excluded from analysis. During aspiration in

vitreous mixture, the Unity VCS with 30,000 CPM probes at 4 cc/min produced a mean force of 1.29 ± 0.05 mN, peak force per cut cycle of 1.99 ± 0.08 mN, and maximum force of 7.47 ± 0.50 mN. These were 29.75%, 31.84%, and 22.30% lower, respectively, than Constellation using 20,000 CPM probes at 350 mmHg with a mean of 1.84 ± 0.09 mN, peak 2.92 ± 0.21 mN, and maximum 9.61 ± 0.75 mN. All Unity VCS force reductions were statistically significant and consistently lower across percentiles ($P < 0.05$).

Conclusions: The next-generation vitrectomy system in flow mode with 30,000 CPM probes offers more stable flow and lower traction forces than the current system in vacuum mode with 20,000 CPM probes at a similar vitreous removal rate, potentially enhancing vitreous removal and reducing iatrogenic retinal break risk.

Abstract No.: 200198
Comparison of Sub-Tenon and Peribulbar Block for Macular Surgeries

*First Author: Mohan **RAJAN***
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Purpose: This paper compares the efficiency of peribulbar and sub-Tenon anesthesia for macular surgeries.

Methods: This prospective study included 135 patients who underwent macular surgeries between April 2024 and April 2025. The patients were randomized to receive a peribulbar and sub-Tenon block before the surgery. The pain was evaluated at the time of administration of the block, during the surgery, and postoperative period of 4 hours. The time of onset of akinesia, duration of surgery, need for additional anesthesia, and complications were noted.

Results: We included 135 patients, of whom 71 received peribulbar anesthesia and 64 received sub-Tenon anesthesia, with mean ± standard deviation (SD) ages of 68.9 ± 18.3 years and 63.9 ± 2.70 years, respectively. The average duration of surgery was 38 ± 12 minutes. None of the patients experienced any systemic complications in either the peribulbar or sub-Tenon groups. Analgesia between the two groups was not statistically significant. Akinesia was graded as complete akinesia, moderate, mild, and full movements. 83% of patients in the peribulbar group and 74% of patients in the sub-Tenon group had total akinesia ($P > 0.05$). The time of onset of akinesia of the peribulbar group was mean and SD 40 ± 10 seconds, and of the sub-Tenon group was 63 ± 8 seconds ($P < 0.05$). Sixteen in the peribulbar group and 21 patients in the sub-Tenon group needed additional anesthesia in the form of sub-Tenon/topical anesthesia during surgery.

Conclusions: This study has shown that sub-Tenon's anesthesia provides adequate analgesia and akinesia for macular surgery with minimal complications.

Abstract No.: 201023
Complications Associated With Silicone Oil (SO) Tamponade Following Routine Pars Plana Vitrectomy for Rhegmatogenous Retinal Detachment

*First Author: Mominul **ISLAM***
*Co-Author(s): Shah Md Rajibul **ISLAM**, Omar **JARAFULLAH**, Golam **RABBANI***

Purpose: To outline the complications related to SO.

Methods: This multicenter, cross-sectional observational study was done from September 2023 to December 2024. All the patients underwent pars plana vitrectomy and endolaser with SO tamponade for rhegmatogenous retinal detachment. Follow-up was done up to six months. A complete ophthalmological examination was carried out preoperatively and postoperatively.

Results: Eighty-nine eyes of 89 subjects were analyzed. The mean age was 53 years (range 32 to 62 years). Sixty (67.42%) eyes were phakic, and the rest were pseudophakic (29 eyes, 32.58%). Seven patients developed keratopathy (7.87%), and nine patients developed retinal detachment (10.11%). SO migration to the anterior chamber occurred in five (5.62%). Emulsification of SO at six months

occurred in 12 eyes (13.48%). Subconjunctival SO migration occurred in eight eyes (8.98%). Twenty-five patients (41.66%) developed lental opacity/cataract progression was noted. Twenty-three (25.84%) patients developed ocular hypertension. Intraocular pressure (IOP) became normal following removal of SO in 12 eyes (52.17%). Four patients (4.49%) needed anti-glaucoma medications for IOP control, despite the removal of SO.

Conclusions: The complications associated with SO in vitreoretinal surgery are typically transient and can be effectively managed through appropriate medical or surgical approaches, leading to favorable long-term outcomes for patients. The complications observed in our case series align with those documented in existing literature; however, extended follow-up is necessary to assess long-term complications accurately. The relatively low complication associated with SO is outweighed by the advantages it provides.

Abstract No.: 201229
Endoscopic Cyst Excision With Laser Photocoagulation: A Unique Approach to the Management of Recurrent Iris Cysts

*First Author: Vivek **DAVE***

Purpose: To describe an effective technique of managing recurrent iris cysts with endoscopic cyst excision coupled with laser photocoagulation.

Methods: This retrospective consecutive noncomparative interventional case series included four cases of recurrent iris cysts previously managed by conventional techniques but showed recurrence. Presenting complaints and detailed history were noted. All patients underwent endoscopic cyst excision with laser photocoagulation of the attachment of the cyst to the root of the iris and ciliary body. The outcome in terms of vision, corneal clarity, recurrence of the cyst, and total follow-up was noted.

Results: We described four cases managed with endoscopic cyst excision with laser photocoagulation. None of the cases showed any recurrence. The cornea showed acceptable clarity at the last follow-up visit. The follow-up period was 1.5 years, four years, two years and one year, respectively, with no recurrence. Case 3 developed glaucoma in the follow-up, requiring filtering glaucoma surgery.

Conclusions: An endoscopic approach and laser photocoagulation allow for a complete cyst excision with a prolonged recurrence free period in recurrent iris cysts. This could be a reasonably good approach to successfully manage a condition that is otherwise known to be recurrent.

Abstract No.: 200789
Enhanced Intraocular Pressure (IOP) Control in Next-Generation Surgical Systems

*First Author: Vara **WUYYURU***
*Co-Author(s): Martin **CHARLES**, Brian **MCDONELL**, Ying **ZHU***

Purpose: This study evaluates IOP control performance between the current-generation Constellation Vision System and the next-generation Unity Vitreoretinal Cataract System (VCS) during scleral indentation and silicone oil injection in air-filled eyes, where current systems face challenges.

Methods: A customized rubber eye (PS-036, Philips Studio, UK) was used to maintain consistent conditions with valved cannulas for the infusion line and pressure sensor. IOP and time were recorded during simulated surgical manipulation in two scenarios. Scenario 1: Fixture-mounted, electric actuator-generated scleral indentation at a speed of 15 mm/s (n = 7). Initial IOP 30 mmHg. Scenario 2: Silicone oil injection using 25 Ga Viscous Fluid Control (VFC) Pak with valved cannula at a vacuum level of 650 mmHg (n = 3). Initial IOP 26 mmHg. Baseline IOP measurements were also collected with a vented valved cannula to represent current surgical practice in an air-filled eye.

Results: IOP following scleral indentation in air-filled eye was significantly more stable with the Unity VCS (29.9 mmHg) than with Constellation (93.3 mmHg), indicating better IOP control ($P < 0.001$). Transition times (time

until IOP stabilization after the start and end of indentation) were significantly shorter with Unity VCS (<1 secs) than with Constellation (>1.5 secs), indicating a faster response to IOP changes from indentation ($P < 0.001$). IOP during silicone oil injection with Constellation, without using a vent, continually increased to 132.7 mmHg while IOP with the Unity VCS was maintained at 26.3 mmHg with no venting. Baseline IOP in Constellation using vent dropped from 26 mmHg to 7.8 mmHg.

Conclusions: The Unity VCS demonstrated effective IOP control in an air-filled eye without the need for interventions such as cannula venting.

Abstract No.: 201133
Enhancing Retinal Laser Delivery in Training: A Clinical Fellow's Perspective on the Norlase Lynx Pattern Indirect Laser

First Author: Roberto Luis ***FRANCO***
Co-Author(s): Daniel Jose ***MENDOZA***

Purpose: To describe a clinical fellow's experience using the Norlase Lynx Laser, the world's first fully integrated, cordless laser indirect ophthalmoscope (LIO) featuring pattern laser technology during procedures, such as scleral buckling and pneumatic retinopexy, and other retinal interventions, and to highlight the advantages of its ergonomic and technical features from a trainee's perspective.

Methods: The Norlase Lynx Laser was used in various clinical scenarios, including intraoperative laser retinopexy during scleral buckling and laser retinopexy following pneumatic injection. Feedback focused on device handling, visualization quality, laser application efficiency, and overall user experience, with comparisons made to traditional wired LIO systems.

Results: The Norlase Lynx Laser improved intraoperative ergonomics during scleral buckling, with its wireless, lightweight design allowing greater head mobility and easier access to the peripheral retina. It delivered consistent laser retinopexy, particularly in post-pneumatic cases. Although not yet used for retinopathy of prematurity screening in our setting, its portability and compact design hold strong potential for bedside use and deployment in remote areas, where conventional laser systems are less accessible.

Conclusions: From a clinical fellow's perspective, the Norlase Lynx Laser offers a game-changing experience in retinal laser delivery across both surgical and outpatient settings. Its cordless, compact design and pattern laser capability enhance maneuverability, reduce physical strain, and increase confidence in laser application. The device proves especially beneficial in training environments, where intuitive, efficient, and versatile tools can significantly impact the learning curve and quality of patient care.

Abstract No.: 201148
Epidemiology and Surgical Outcomes of Mechanical Ocular Trauma in the UK: A Single-Center Retrospective Study

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Purpose: Ocular trauma may cause significant visual impairment and numerous retinal complications without timely treatment, yet the epidemiology and surgical outcomes of ocular trauma in the Midlands, UK, remain outdated.

Methods: A single-center retrospective study was conducted on patients with mechanical ocular trauma during 2022-2024 with surgical intervention. Birmingham Eye Trauma Classification (BETT) and Ocular Trauma Score (OTS) were adapted to describe traumatic characteristics. Surgical outcomes were evaluated at presentation, immediately postoperation (post-op), and three-month post-op using best-corrected visual acuity (BCVA) and intraocular pressure (IOP) adjusted score, calculated by absolute value difference between the reference range of 10-21 mmHg and recorded IOP. A smaller adjusted score indicates a better surgical outcome.

Results: A total of 75 cases (White 40%; Asian 29.3%) (mean age 43.3 ± 22.0 years) were

recruited. Males (80%) dominated (P < 0.0001). The majority (86%) had graded OTS 1-3. 73.3% had open wounds, 20% had intraocular foreign bodies, and 65.3% involved globe rupture. Notably, 25.3% had retinal detachment. The mean BCVA improved at post-op and three months by 0.114 and 0.432 logMAR, respectively (both P < 0.0001). Post-op means IOP adjusted score improved by 1.861 mmHg (P = 0.005) and stabilized without significant change at three months (P = 0.736).

Conclusions: This study presented updated epidemiology and surgical outcomes of traumatic eye injuries in the Midlands, using classification systems dedicated to ocular trauma on first-hand data. Our results show that timely operation may preserve and even enhance mean BCVA and IOP and avoid further structural or functional deterioration despite globe rupture and retinal detachment.

Abstract No.: 200481
Evaluation of Vortex Vein Diameter and Area and Choroidal Thickness Before and After Scleral Buckling (SB) Surgery Using Ultra-Widefield Red Wavelength Fundus Imaging

*First Author: Nozomu **HASHIYA***
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Purpose: To evaluate changes in vortex vein diameter, vessel area, and subcentral choroidal thickness (SCT) before and after SB surgery for rhegmatogenous retinal detachment (RRD) using ultra-widefield red wavelength fundus imaging.

Methods: This study included 23 eyes of 22 patients (13 males, 9 females; mean age 33.1 years) who underwent SB without concomitant vitrectomy. Using Optos California red wavelength images, 1–3 vortex veins adjacent to the buckle were selected per eye, and their maximum diameter was measured. To evaluate the vascular area, a five-disc diameter region around each vortex vein was extracted and binarized using ImageJ software, allowing quantitative measurement of the vessel area. SCT was measured using swept-source optical coherence tomography. Intraocular pressure (IOP) was also recorded. Measurements were taken preoperatively, at one week, and at one month postoperatively.

Results: The mean maximum vortex vein diameter (n = 39) was 0.68 mm (preoperative), 0.71 mm (one week), and 0.68 mm (one month), showing no significant change (P > 0.05). Mean perivascular area (n = 34) was 20.7, 20.5, and 20.5 mm^2, respectively (P > 0.05). SCT increased significantly at one week (261.6 to 280.6 µm; P = 0.003), then returned to baseline (256.9 µm). IOP remained unchanged. Vortex vein enlargement was observed in only four eyes.

Conclusions: SB did not significantly alter vortex vein diameter or area overall, but transient choroidal thickening suggests temporary changes in choroidal circulation following surgery.

Abstract No.: 200188
Foldable Capsular Vitreous Body (FCVB): A Systematic Review and Meta-analysis

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Purpose: To assess the indications, complications, and outcomes of FCVB.

Methods: We registered the protocol for this study in PROSPERO (CRD42024595501). We systematically searched across PubMed, Scopus, Cochrane, Web of Science, and Google Scholar for English and Chinese literature to evaluate the indications, complications, and outcomes of FCVB. We performed our meta-analysis using Generalized Linear Mixed Model (GLMM) method to quantify all the collected data.

Results: We included 23 studies consisted of 533 patients (533 eyes) in large centers across China. Fourteen studies had good overall quality, and the rest had fair. FCVB indications included choroidal injury, retinal detachment, globe rupture, perforating and penetrating injury, silicone oil dependency,

silicone oil response failure, C3F8 failure, non-rupture blunt injuries, ocular atrophy, and endophthalmitis. Postoperatively, best-corrected visual acuity of FCVB patients improved starting from six months, while intraocular pressure (IOP) started to stabilize after three months. Pooled retinal reattachment rate (RRR) was 94.84% (95% confidence interval [CI]: 75.65%–99.09%; I^2 = 55%; p-Het < 0.01). All complications occurred at a very low rate within the anterior segment to posterior segment, such as corneal degeneration, corneal endothelial decompensation, corneal opacity, hyphema, shallow anterior chamber, pupillary proliferative membrane, thin membrane on FCVB capsule's surface, broken FCVB capsule, ocular hypertension, conjunctival hyperemia, sympathetic ophthalmia, and enucleation.

Conclusions: The findings indicate that with proper patient selection, FCVB provides effective long-term intraocular tamponade with a favorable safety profile. Complications were very low, and the device exhibited reasonable improvement in visual acuity and IOP control.

Abstract No.: 200906
Full-Thickness Laser-Induced Macular Hole From a Semiconductor Laser Cleaner

*First Author: Marc Alfred **MANGAHAS***
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Purpose: Ocular injury may result from laser devices used in nonmedical settings, representing a potentially vision-threatening occupational hazard. We reported the diagnosis and management of a rare case of a macular hole secondary to injury from a semiconductor laser.

Methods: A case report.

Results: A 28-year-old male factory worker presented with sudden blurring of vision, reported as the sensation of "bubbles" in the left eye immediately after accidental exposure to a handheld laser used to clean metal probes for semiconductors. The laser had a wavelength of 1064 nm and a pulse energy of 800 mJ. The best-corrected visual acuity was 20/125 in the affected eye. Initial examination revealed a discrete hypopigmented patch at the fovea. Optical coherence tomography (OCT) showed subfoveal disruption of the retinal pigment epithelium (RPE) and disorganization of the overlying retinal layers. The patient was initially managed conservatively. At two months, OCT revealed development of a full-thickness macular hole with subfoveal hyperreflectivity from RPE atrophic changes with a widest diameter of 404 µm. Pars plana vitrectomy with internal limiting membrane peeling and C3F8 tamponade was done. Postoperatively, closure of the macular hole was observed, but vision remained stable at 20/125, possibly owing to irreversible RPE and photoreceptor damage.

Conclusions: Accidental retinal injury from laser devices can result in significant vision loss. Laser-induced macular holes can be managed with vitrectomy with anatomic closure, but visual prognosis is affected by the degree of sustained RPE and photoreceptor damage. Prevention with the use of safety goggles should be advised.

Abstract No.: 200150
Functional Evaluation of Macular Hole (MH) Using Microperimetry With Different Techniques of Internal Limiting Membrane (ILM) Peeling

*First Author: Yohei **NOZAKI***
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Purpose: To compare the postoperative visual function of patients who underwent vitrectomy for MH using three ILM peeling techniques: complete ILM peeling, fovea-sparing ILM peeling (FSIP), and inverted ILM flap techniques.

Methods: A total of 92 eyes from 92 patients were analyzed. Patients were divided into complete ILM peeling (n = 37), FSIP (n = 33), and inverted ILM flap (n = 22) groups. Inclusion criteria included primary MH with successful closure. Best-corrected visual acuity (BCVA) and microperimetry (MP-3) were evaluated before and 12 months after surgery. Retinal sensitivity

was assessed in five regions: center, superior, inferior, temporal, and nasal.

Results: Postoperative BCVA improved significantly in all groups (P < 0.001). However, the Inverted group showed worse BCVA (0.28 ± 0.52 logMAR), compared to the Complete (0.06 ± 0.13, P < 0.001) and FSIP groups (0.07 ± 0.17, P < 0.001). Microperimetry showed central sensitivity improved in all groups, while temporal sensitivity decreased (Complete: P = 0.009, FSIP: P = 0.049, Inverted: P = 0.006). Central scotomas were more frequent in the Inverted group (55%), compared to Complete (11%) and FSIP (0%). Superior (32%) and temporal (59%) microscotoma expansion was also higher. Among large MH cases (≥400 µm), the Inverted group had poorer BCVA (0.33 ± 0.20), compared to Complete (0.10 ± 0.12, P =0.003) and FSIP (0.14 ± 0.24, P = 0.003).

Conclusions: The inverted ILM flap achieved higher closure rates in large MH but showed poorer visual recovery. Temporal sensitivity decreased postoperatively in all groups, especially in the Inverted group. These findings suggest that the MH size and ILM peeling techniques affect visual outcomes.

Abstract No.: 201400
Impact of Timeliness in Diagnosis on Treatment Outcomes in Retinal Detachment: A Retrospective Analysis at Hospital Raja Perempuan Zainab II

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Purpose: To evaluate the visual and anatomical outcomes of rhegmatogenous retinal detachment (RRD) repair, analysing the impact of symptom durations and macular involvement on postoperative visual recovery.

Methods: A retrospective cohort study of 80 eyes undergoing RRD surgery was conducted at a tertiary centre from a total of 348 vitreoretinal surgeries in 2023. Baseline characteristics, including age, high myopia, pseudophakia, symptom duration, macular status, and tamponade type, were analyzed. Visual acuity (VA) preoperatively and postoperatively was compared using paired t-tests, while multivariable linear regression adjusted for potential confounders. Surgical success, redetachment rates, and factors influencing postoperative VA were assessed.

Results: The majority were male (66.3%) and Malay (93.8%), with a mean age of 56.3 years. Most patients (62.5%) presented with symptoms exceeding 14 days, and 83.8% had macula-off detachments at presentation. Surgical interventions utilized various tamponade agents, with silicone oil being the most common (60%). Postoperative outcomes showed a redetachment rate of 23.7%. VA significantly improved (mean improvement of 0.22 logMAR, P = 0.030). Those who presented within seven days of symptom onset demonstrated significantly better postoperative VA (mean = 0.90 logMAR) compared to those with delayed presentation of more than 14 days (mean = 1.40 logMAR). However, the timing of presentation did not significantly affect anatomical reattachment rates (P = 0.931).

Conclusions: These findings underscore the importance of early diagnosis and prompt intervention in improving functional outcomes in retinal detachment cases. Enhancing public awareness and optimizing referral pathways may contribute to earlier presentation and better visual prognoses.

Abstract No.: 200733
Internal Limiting Membrane (ILM) Flap Versus Conventional Peeling for Idiopathic Full-Thickness Macular Holes (FTMHs): A Registry Analysis of 2990 Eyes

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Purpose: The ILM flap (ILM-F) technique was introduced to treat large (>400 µm) FTMHs. Controversy exists regarding the benefits of ILM-F compared to conventional peeling. To address this, we used a binational registry

database to assess the anatomical and functional outcomes of ILM-F in idiopathic FTMHs.

Methods: A retrospective cohort study was performed using the Australian and New Zealand Society of Retinal Specialists (ANZSRS) Registry between October 2006 and November 2023. Patients underwent either ILM-F or conventional ILM peeling (ILM-P). The outcome measures were hole closure rate and best-corrected visual acuity (BCVA) change at three months. Propensity score weighting and multivariable regression analysis were performed to adjust for baseline characteristics and covariates (surgeon grade, lens status, and follow-up duration).

Results: A total of 2990 eyes of 2905 patients were included (mean age 69 ± 9 years), of which 119 eyes underwent ILM-F and 2871 underwent ILM-P. The median hole size was 300 µm (interquartile range, 200–422 µm). On weighted multivariable regression analysis, ILM-F showed higher odds of hole closure compared to ILM-P (odds ratio [OR] = 2.97, 95% confidence interval [CI]: 1.08–8.20, P = 0.04). No significant difference in BCVA gain was observed at three months (P = 0.08). The effects of ILM-F compared to ILM-P were consistent across hole size groupings: small/medium (≤400 µm), large (401-550 µm), and X-large + (>550 µm).

Conclusions: Although ILM-F was more effective than ILM-P in achieving FTMH closure, it provides no additional visual acuity benefit.

Abstract No.: 201046
Internal Limiting Membrane (ILM) Peeling Versus Microscope-Integrated Optical Coherence Tomography (MIOCT)–Guided Membrane Removal in Diabetic Tractional Retinal Detachment (TRD)–Impact on Epiretinal Membrane (ERM) Formation

*First Author: Divya **CHAUHAN***

Purpose: To compare anatomical and functional outcomes, including postoperative ERM formation and visual acuity, following MIOCT-guided membrane removal without ILM peeling versus conventional ILM peeling in eyes undergoing vitrectomy for diabetic TRD.

Methods: A total of 30 eyes with diabetic TRD were randomized into two groups: Group A (n = 15) underwent vitrectomy with ILM peeling; Group B (n = 15) underwent vitrectomy with MIOCT-assisted membrane removal. All surgeries were performed by a single surgeon. Final assessment included functional and anatomical outcomes, ERM formation, and other complications at three months postoperatively.

Results: Our study shows significant improvement in best-corrected visual acuity in both groups; however, Group B demonstrated faster visual recovery in the early postoperative period with no significant difference at the final follow-up. ERM developed in 30.77% (Group A) versus 86.7% (Group B) (P = 0.002). Retinal Detachment occurred in two eyes in Group A, unrelated to ILM peeling.

Conclusions: While MIOCT enhances intraoperative membrane visualization, it does not obviate the need for ILM peeling to reduce postoperative ERM formation in diabetic TRD. ILM peeling remains superior for minimizing ERM risk, despite comparable anatomical and visual outcomes between the techniques.

Abstract No.: 200108
Intraoperative Hemostasis in Proliferative Diabetic Retinopathy (PDR) Vitrectomy: A Randomized Trial of Tranexamic Acid Versus Adrenaline in the Infusion Bottle

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Purpose: To compare the efficacy of intraocular tranexamic acid and adrenaline, each added to the infusion bottle, in achieving intraoperative hemostasis during pars plana vitrectomy (PPV) for PDR, and to assess their impact on surgical visibility, operative time, and early postoperative outcomes.

Methods: This prospective, randomized controlled trial enrolled 60 eyes undergoing PPV for active PDR with vitreous hemorrhage

or tractional retinal detachment. Patients were randomized to receive either tranexamic acid (50 mg/mL) or adrenaline (1:100,000) added to the infusion bottle. Intraoperative bleeding was graded using a standardized bleeding score. The number of endodiathermy applications and intraocular pressure (IOP) spikes were recorded. Secondary outcomes included surgical field visibility, postoperative vitreous hemorrhage, and best-corrected visual acuity at one month. The evaluator was masked to group allocation.

Results: There were 30 eyes in each group. The adrenaline group showed significantly lower intraoperative bleeding scores (1.3 ± 0.5 vs. 2.1 ± 0.7; $P < 0.01$) and fewer diathermy applications (4.8 vs. 7.3; $P < 0.01$). Operative time was reduced by eight minutes on average ($P = 0.03$). Surgical field visibility, postoperative hemorrhage, IOP spikes, inflammation, and visual acuity outcomes were comparable between groups. No systemic adverse effects were observed.

Conclusions: Compared to tranexamic acid, adrenaline in the infusion bottle offers superior intraoperative hemostasis, fewer interventions, and reduced surgical time without compromising safety or visual outcomes, making it a valuable adjunct in PDR surgery.

Abstract No.: 200855
Is Preoperative Anti–Vascular Endothelial Growth Factor (Anti-VEGF) the Missing Step in Proliferative Diabetic Retinopathy (PDR) Surgery? A Comprehensive Meta-Analysis and Trial Sequential Analysis (TSA)

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Purpose: To assess the efficacy and safety of preoperative anti-VEGF in PDR patients undergoing pars plana vitrectomy (PPV), using meta-analysis and TSA, focusing on surgical and visual outcomes such as best-corrected visual acuity (BCVA).

Methods: A PRISMA-based systematic review was conducted. PubMed, Cochrane Central, and ClinicalTrials.gov (2005–2024) were searched. Included were randomized controlled trials (RCTs) comparing preoperative anti-VEGF with vitrectomy alone, involving ≥10 PDR patients. Two reviewers assessed studies with RoB-2. Outcomes included intraoperative surgical time (IOST), bleeding (IB), iatrogenic retinal breaks (IIRB), silicone oil use (IST), early postoperative bleeding (EPB), and BCVA. An univariate meta-analysis model was conducted for each outcome assessed, using either inverse variance or Mantel-Haenszel method for study weight estimate, and the Restricted Maximum Likelihood (REML) method for Tau2 estimate. TSA were conducted with a two-sided α of 5%, β of 80%, and either the number of event incidences or the mean difference.

Results: Eighteen RCTs (1254 eyes) were analyzed. Anti-VEGF significantly reduced IB (risk ratio [RR] 0.48), IOST (MD −17.90 min), and IST use (RR 0.49). TSA confirmed conclusive evidence for IIRB (RR 0.59) and EPB (RR 0.37). However, BCVA improvement (MD 0.15 logMAR; $P = 0.15$) lacked statistical power ($n = 546$ vs. required 2105), indicating insufficient evidence on visual outcomes.

Conclusions: Preoperative anti-VEGF improves surgical safety and efficiency in PDR, with TSA providing conclusive support for several endpoints. However, long-term visual benefit remains unclear. Future research should focus on functional vision, an essential yet underreported outcome.

Abstract No.: 200738
Long-Term Outcome After Scleral Imbrication (SI) Combined With Pars Plana Vitrectomy (PPV) for Myopic Schisis

*First Author: Takayuki **BABA***

Purpose: Myopic macular schisis has been reported to develop a full-thickness macular hole (FTMH) and retinal detachment associated with FTMH. Previously, we reported the usefulness of SI and PPV for treating myopic schisis (Baba T et al. Retina, 2016]. In this

report, we present the long-term outcomes after SI and PPV for myopic schisis.

Methods: We included the data from 15 eyes of 15 patients with myopic schisis treated by SI and PPV at the Chiba University Hospital from 2014 to 2020. All cases were followed for more than five years. Visual functions and morphological changes were compared between baseline and the last visit.

Results: The mean follow-up time was 112 ± 34 months. Best-corrected visual acuity improved from 0.68 ± 0.26 logMAR to 0.62 ± 0.45 logMAR. Retinal detachment and retinoschisis were resolved in all cases, and the recurrence of detachment and schisis was not observed. Macular neovascularization developed in three eyes (20%) during the follow-up. Macular atrophy was observed in six eyes (40%) at the final visits, and the BCVA tended to be poorer in eyes with atrophy than in eyes without atrophy.

Conclusions: SI combined with PPV effectively treated myopic macular schisis, and retinal morphology was well retained for a long period. However, the cases that developed macular atrophy showed unfavorable visual outcomes.

Abstract No.: 200243
Managing Large Cyclodialysis Clefts and Hypotony

*First Author: Manisha **AGARWAL***

Purpose: To evaluate the safety and effectiveness of the sewing machine technique for managing the large cyclodialysis clefts and the associated hypotony.

Methods: A case series of five patients aged 14 to 30 years presented with hypotony, with intraocular pressure (IOP) in the range of 2 to 5 mmHg. All five patients had a history of blunt trauma leading to a cyclodialysis cleft. The cyclodialysis cleft in all cases was greater than 180 degrees, and the extent was confirmed by gonioscopy and ultrasound biomicroscopy. Despite maximum medical management, the IOP did not increase, and all patients exhibited optic disc edema with hypotony maculopathy and significant vision loss.

Results: All five patients underwent cyclodialysis repair with the new sewing machine technique, and postoperatively showed an increase in the IOL with normalization of the macula and optic disc with an increase in the best-corrected visual acuity. The average follow-up is six months.

Conclusions: The sewing machine technique for the repair of large cyclodialysis clefts is a safe and effective procedure, which helps correct the associated hypotony.

Abstract No.: 201006
Microbiological Analysis of Vitreous Sample in Endophthalmitis Patients at a Tertiary Eye Care Hospital in Bangladesh

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Purpose: This study was planned to determine the microbiological organism of endophthalmitis patients (vitreous sample) attending in a tertiary eye care hospital.

Methods: A prospective longitudinal study was undertaken from July 2022 to December 2022. All patients underwent a through history, clinical examination, and appropriate investigations. After a clinical diagnosis of endophthalmitis was reached, pars plana vitrectomy was performed, and vitreous tap was sent for microbiological analysis. The microbiological reports were collected, and the patients were monitored on follow-up.

Results: Out of 223 patients with endophthalmitis, majority 100 (44.8%) were aged 50 years or older. Most were male 134 (60.1%). The male-to-female ratio was 1.5:1. Eighty-nine (39.9%) were culture-positive and included bacteria 61 (27.4%), fungus 26 (11.7%), and both two (0.9%). The most common bacteria identified was Pseudomonas sp. 20 (31.7%) followed by Staphyloccus aureus 13 (20.6%), Staphyloccus epidermidis 11 (17.5%), and Bacillus 10 (15.9%). Commonest fungus identified was Candida 12 (42.9%) and

Fusarium 9 (32.1%). Staphyloccus pneumonie was significantly higher in those less than 18 years (14.3%). Pseudomonas sp. was significantly higher in female patients (46.2% vs. 21.6%). Candida was significantly higher in the age group 19-50 (83.3%).

Conclusions: The study concluded that total culture positivity was 39.9%, which included bacterial (27.4%,), fungal (11.7%), and mixed organisms (0.9%). The most common bacterial organism identified was Pseudomonas sp., Staphyloccus aureus, Staphyloccus epidermidis, and Bacillus in postoperative endophthalmitis. The most common fungus organism identified was Candida and Fusarium in postoperative endophthalmitis.

Abstract No.: 201092
Occult Globe Rupture in a Filipino Male: Diagnostic Limitations of Computed Tomography (CT)

*First Author: Jubaida **AQUINO***
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Purpose: To report a case of posterior globe rupture following blunt trauma, initially undetected on CT. It emphasizes the limitations of CT imaging in detecting occult injuries, and the importance of clinical signs and maintaining a high index of suspicion in ocular trauma.

Methods: This case report details the patient's clinical history, examination findings, multimodal imaging including B-scan ultrasonography and CT imaging, and intraoperative findings from the surgical exploration.

Results: A 48-year-old Filipino male sustained blunt trauma to the left brow from the broken end of a sickle knife. Initially asymptomatic except for superficial injuries, he developed gradual blurring of vision in the left eye one day post-injury. Ocular examination revealed a brow laceration, lid swelling, chemosis, subconjunctival hemorrhage without conjunctival violation, decreased visual acuity, relative hypotony, deep anterior chamber. CT imaging showed an intact left globe. However, B-scan ultrasonography revealed an area of scleral discontinuity. Surgical exploration confirmed a 10-mm curvilinear, shelved scleral laceration located superonasally.

Conclusions: CT imaging plays a key role in evaluating ocular trauma but has limitations in detecting occult globe rupture, particularly in blunt injuries. Studies show that globe size may appear normal in nearly half of cases, and CT sensitivity may be as low as 76%, with a reduced negative predictive value in blunt trauma. These findings emphasize the need for a high index of suspicion and the use of multimodal imaging and clinical correlation to ensure timely and accurate diagnosis.

Abstract No.: 200515
Optical Coherence Tomography (OCT) Biomarkers Predictive of Surgery in Proliferative Diabetic Retinopathy (PDR)–Related Vitreomacular Traction (VMT)

*First Author: Vivek **DAVE***
*Co-Author(s): Manoj **SHETTIGAR***

Purpose: To evaluate and compare various OCT biomarkers predictive of surgery in PDR-related VMT.

Methods: Descriptive analysis of the eyes diagnosed with PDR imaged with OCT was documented to have VMT between August 2014 and July 2023. We analyzed various OCT biomarkers that could predict VMT surgery following PDR. A 2 x 2 table applying the chi-square test was used to predict the strength of the OCT biomarkers. Multivariate logistic regression analysis was used to analyze the variables determining surgical intervention. Data was collected from electronic medical records.

Results: One hundred and eighty patients with PDR who had VMT were analyzed. Among them, the OCTs of 223 eyes were involved in the study, 146 eyes (65.47%) were observed, and surgery was advised in the rest of the eyes. OCT biomarkers associated with lamellar macular holes (odds ratio [OR] 12.21, 95% confidence interval [CI]: 3.43–43.44) and an angle between the retina and posterior hyaloid of more than 90 degrees (OR 3.6, 95% CI: 1.97–

6.59) are predictive of the need for surgery. Other OCT biomarkers, including subfoveal cysts (OR 1.82, 95% CI: 0.77–4.26), thinning of the roof of subfoveal cysts (OR 8.74, 95% CI: 4.65–16.4), and perifoveal traction (OR 3.14, 95% CI: 1.75–5.63), are predictive observations compared to surgery.

Conclusions: OCT biomarkers can be predictors of the need for surgery in VMT following PDR. The subset of VMT with lamellar macular hole is more predictive of surgery than observation.

Abstract No.: 200543
Optimal Timing of Surgical Intervention and Its Effect on Visual and Anatomical Outcomes in Suprachoroidal Hemorrhage (SCH): A Multicenter Retrospective Study

*First Author: De-kuang **HWANG***
*Co-Author(s): Jing-yi **CHEN**, Wen-jung **LO**, Chih-yu **YEH***

Purpose: To investigate the relationship between timing of surgical intervention and clinical outcomes in patients with intraoperative or postoperative SCH.

Methods: In this retrospective, multicenter study, we reviewed the records of patients diagnosed with intraoperative or postoperative SCH between January 2007 and January 2025 in Taiwan. Twenty-nine eyes were analyzed and stratified into early (<7 days) and delayed (≥7 days) intervention groups. Demographic data, intraocular pressure (IOP), best-corrected visual acuity (BCVA), and anatomical outcomes were compared.

Results: Baseline characteristics were similar between the groups, except for a higher prevalence of high myopia in the delayed intervention group (P = 0.048). Anatomical success was significantly greater in the delayed group (88% vs. 46%, P = 0.041), while BCVA and final IOP did not differ significantly. Notably, eyes with no light perception (NLP) had a significantly longer median intervention time compared to non-NLP cases (14.3 ± 6.8 vs. 7.2 ± 6.6 days, P = 0.018).

Conclusions: Delayed surgical intervention (≥7 days) is associated with improved anatomical outcomes in SCH. However, prolonged delays beyond 14 days are linked to poor visual prognosis. An optimal intervention window of 7 to 14 days after SCH onset may maximize visual potential.

Abstract No.: 200849
Outcomes and Complications of Yamane Scleral Fixated Secondary Intraocular Lens (IOL)

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*Co-Author(s): Alfonso **IOVIENO**, Aaron W. **JOE**, Joanne Christine E. **MACENAS-WONG**, Valerie **MOK**, Jessica **XIONG***

Purpose: This study evaluates the visual outcomes and safety of the Yamane technique across two separate retina centers in British Columbia, Canada.

Methods: This was a retrospective cohort analysis of all patients undergoing Yamane IOL fixation from January 2021 to December 2024, across two separate vitreoretinal centers. We collected patient demographics, preoperative best-corrected visual acuity (BCVA), intraoperative and postoperative complications. BCVA was recorded at day 1(D1), week 1(W1), and months 1(M1), 3(M3), 6(M6), and 12(M12) postoperatively.

Results: A total of 151 patients (53% male, median age 76 years) were included. Indications included subluxed IOL (37%, n = 56), complicated cataract surgery (22%, n = 33), dislocated IOL (20%, n = 30), pseudoexfoliation syndrome (19%, n = 28), insufficient capsular support (n = 15%, n = 23), trauma (13%, n = 19), aphakia (11%, n = 17), and uveitis-glaucoma-hyphema syndrome (1.3%, n = 2). The maximum follow-up was one month in 34%, three months in 20%, six months in 16%, and 12 months in 15% of cases. The average preoperative BCVA was 6/270, postoperative BCVA was 6/120 D1, 6/36 W1, 6/18 M, and 6/24 M12. Intraoperative complications occurred in 16% of cases, including iris complications (6%), haptic complication (2%), IOL decentration (2%), and choroidal hemorrhage (1%). Postoperative complications included corneal edema (15%), ocular

hypertension (19%), cystoid macular edema (CME) (11%), vitreous hemorrhage (4%) and IOL decentration (3%). At the final follow-up, 4% had corneal edema, 3% IOL decentration, and 2% CME.

Conclusions: The Yamane IOL fixation technique demonstrates excellent visual outcomes and a low incidence of long-term complications.

Abstract No.: 200172
Outcomes of Primary Vitrectomy for Rhegmatogenous Retinal Detachment (RRD): Interventional Retrospective Consecutive Case Series of 116 Patients Without Postoperative Positioning

First Author: David ***ALMEIDA***
Co-Author(s): David ***ALMEIDA***

Purpose: Face-down positioning after surgery for RRD is standard practice, but its effectiveness still needs to be determined. This study investigated the outcomes of RRD repair conducted without postoperative face-down positioning.

Methods: This study consists of a retrospective consecutive interventional case series of 116 consecutive eyes in 116 patients undergoing primary vitrectomy for RRD repair. All patients were recruited from retina clinics at one institution and treated by one surgeon (DA). All eyes underwent vitrectomy RRD reattachment with endolaser and intraocular tamponade with either 14% perfluoropropane gas (C3F8) or 20% sulfur hexafluoride (SF6) gas. Surgical outcomes, single surgery anatomic success (SSAS), and visual acuity were investigated. The primary objective is to study the anatomic and visual outcomes of vitrectomy RRD reattachment without employing postoperative face-down posturing.

Results: SSAS was achieved in 112 (96.5%) of 116 eyes — 100% in phakic patients (n = 56) and 93% in pseudophakic patients (n=60) — with both groups experiencing a mean improvement in best-corrected visual acuity (BCVA). There were no complications attributed to intraocular pressure fluctuations.

Conclusions: Primary vitrectomy without postoperative face-down positioning is a successful surgical intervention for RRD repair. Our current anatomical closure rate is one of the highest reported in the literature and involved many macula-off RRDs, with minimal complications and significant improvement in BCVA, primarily using 14% C3F8 for gas tamponade.

Abstract No.: 201048
Pediatric Rhegmatogenous Retinal Detachment (RRD) Associated with Vasoproliferative Tumor (VPT) Secondary to Behcet Disease

First Author: Divya ***CHAUHAN***

Purpose: To report a rare case of pediatric secondary RRD associated with VPT secondary to Behcet disease.

Methods: A 10-year-old girl with known Behcet disease on topical steroids presented during routine follow-up with reduced right eye vision (6/36). Fundus examination revealed subtotal RRD sparing the macula and an inferotemporal VPT with telangiectatic vessels, lipid exudation, and a retinal break at its base. The patient underwent scleral buckle surgery with subretinal fluid drainage and cryotherapy to the lesion.

Results: Postoperatively, the retina was reattached successfully, and the patient remains stable on follow-up.

Conclusions: This is the first reported case of pediatric secondary RRD due to VPT in Behcet disease. Early diagnosis and surgical intervention are crucial to prevent vision loss in such cases.

Abstract No.: 201063
Predictive Factors for Visual Outcomes in Perforating Ocular Gunshot Pellet Injuries Requiring Pars Plana Vitrectomy (PPV): A Bangladeshi Experience and Review

First Author: Mohammad Ahmed Mustafa ***HOSSAIN***
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Purpose: To identify predictive factors influencing visual outcomes in perforating ocular gunshot pellet injuries necessitating PPV in a tertiary care hospital in Bangladesh.

Methods: This retrospective observational study analyzed 35 patients (35 eyes) who sustained perforating ocular gunshot pellet injuries and underwent PPV at tertiary hospital during the July-August unrest in Bangladesh. Demographic data (age, gender), initial visual acuity (VA), zone of injury, and timing of PPV after primary repair were recorded. VA at six months post-PPV was considered the final outcome.

Results: All 35 patients were male, with a mean age of 25.77 ± 17.84 years. The most common age group affected was 21–30 years (48.57%) [13]. On presentation, 48.57% had fair VA (6/18 – 6/60) and 37.14% had poor VA (<6/60). At six months, 40% had poor VA, while 22.86% achieved good VA (>6/18). Zone 2 injuries had the most favorable visual outcome, and zone 3 injuries had the worst (P = 0.023). Better initial VA significantly correlated with better final VA (P = 0.0001) [33]. Earlier PPV (within one week of primary repair) was associated with better final visual outcomes (P = 0.035).

Conclusions: Perforating ocular gunshot pellet injuries disproportionately affect young males. Initial visual acuity, zone of ocular injury, and timing of PPV are significant prognostic indicators for final visual outcome. While these injuries often lead to severe visual impairment, timely and appropriate surgical intervention can improve outcomes.

Abstract No.: 200450
Presentation and Outcomes of Posttraumatic Full-Thickness Macular Holes (FTMH)

First Author: Neha ***GOEL***
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Purpose: The purpose of the study is to describe presenting features and outcomes of vitrectomy for a large series of posttraumatic FTMHs.

Methods: This retrospective study included all subjects with posttraumatic FTMHs seen by authors from January 2008 to December 2024. Demographic, clinical data, and imaging (clinical fundus photographs, autofluorescence images, and optical coherence tomography) were retrieved from the medical records and analyzed.

Results: A total of 73 patients with posttraumatic FTMHs with mean age of 21 ± 10.1 years were included in the study. Males were predominantly affected (91.7%). Patients presented 1.86 ± 1.22 months after trauma. Retinal pigment epithelium atrophy, choroidal rupture, and subretinal bleed were the commonest associated findings. Thirty-three patients underwent vitrectomy. Visual acuity improved from 0.137 ± 0.09 to 0.251 ± 0.191 (Snellen fraction) at three months after the trauma. Two holes did not close, three had type 2 closure, and the rest had type 1 closure. Eight eyes had spontaneous closure of macular hole. Thirty-two eyes were not operated because of poor prognosis due to concurrent damage to the retina.

Conclusions: Several posttraumatic FTMHs are not amenable to surgery in view of concurrent damage to retina. When operated, the traumatic holes undergo hole closure with improvement in visual acuity.

Abstract No.: 201079
Preserve the Plug: Operculum-Guided Macular Hole Surgery for Consistent Anatomical and Functional Success

*First Author: Zakia **ANWER***
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Purpose: A retrospective interventional case series, evaluating anatomical and functional outcomes of full-thickness macular hole (FTMH) surgery using operculum-guided posterior vitreous detachment (PVD) and operculum preservation as an intrinsic scaffold.

Methods: Seven eyes of seven patients with FTMH and visible operculum underwent 25-gauge pars plana vitrectomy. Preoperative and intraoperative planning involved mapping operculum location (nasal or temporal), and initiating PVD from the opposite edge to avoid traction on the operculum. Partial PVD was performed while deliberately sparing the operculum. Five eyes underwent conventional internal limiting membrane (ILM) peeling, and two eyes received an inverted flap technique. Key variables analyzed included preoperative and postoperative best-corrected visual acuity (BCVA), macular hole dimensions, operculum site/size, ellipsoid zone (EZ) and external limiting membrane (ELM) integrity, and central foveal thickness. Follow-up was performed at one, three, and six months.

Results: All eyes achieved type 1 hole closure. The mean BCVA improved from 0.85 to 0.45 logMAR. The mean minimum hole diameter was 302 ± 48 µm (range: 250–380 µm), and base diameter averaged 950 ± 110 µm. Operculum location temporal in four cases and nasal in three; operculum diameter ranged from 180 to 300 µm. Visual recovery and anatomical closure were consistent, regardless of ILM technique or operculum position. ELM and EZ restoration correlated with improvement in visual acuity.

Conclusions: Operculum-guided PVD with preservation of the foveal plug offers a natural scaffold for macular hole closure, improving consistency in outcomes. This approach may reduce reliance on complex ILM techniques and can be adopted as a standard step in FTMH surgery planning.

Abstract No.: 200791
Quantitative Safety and Brightness Assessment of the Red, Green, and Blue (RGB) Light-Emitting Diode (LED) Light Source on the Unity Vitreoretinal Cataract System (VCS) Platform

*First Author: Vara **WUYYURU***
*Co-Author(s): David **CHOW**, Dean **RICHARDSON**, Ron **SMITH***

Purpose: To evaluate the safety, brightness, and clinical options of the new RGB LED light source on the Unity VCS platform.

Methods: Safety of the new Unity VCS RGB LED light source was assessed by obtaining spectral curves for the four filter options (Cool White, Warm White, Yellow, and Light Sentry mode) using an integrating sphere and spectroradiometer. These spectral curves were integrated with the aphakic hazard curve to calculate the aphakic hazard sums for each Unity VCS light filter option and the previous Constellation system Xenon light source. Twenty probes were tested across all three output ports on two consoles (120 curves). Brightness of 23G, 25G, and 27G probes was assessed at baseline settings and maximum 100% output.

Results: Aphakic safety calculations (lumens/hazard watt) revealed greater safety across all Unity filters compared to Constellation Xenon (1641): Cool White (1988, 1.21 times safer), Warm White (2883, 1.76 times safer), Yellow (8507, 5.18 times safer), and Light Sentry (17943, 10.9 times safer). Brightness at default/maximum output on the Unity was: 23G 7.87/39 lumens, 25G 7.74/29 lumens, and 27G 7.85/17 lumens.

Conclusions: All Unity RGB LED filter options demonstrated greater safety (Light Sentry mode > Yellow > Warm White > Cool White) than the previous Constellation Xenon light source. Consistent baseline brightness of around 7.8 lumens was observed across all probe gauges. RGB LEDs allow for surgeon-

controlled color customization. Light Sentry mode offers a substantial increase in safety, while the accompanying yellow view can be neutralized by Ngenuity users through white balance.

Abstract No.: 200924
Retinal Vascular Reconstruction (RVR) for Branch Retinal Vein Occlusion (BRVO)

*First Author: Shuai **SHENG***

Purpose: To evaluate the feasibility and efficacy of RVR for treating BRVO.

Methods: Ten patients diagnosed with BRVO by clinical and imaging examinations were enrolled. Five patients received anti–vascular endothelial growth factor (anti-VEGF) therapy (intravitreal injections), while the other five underwent RVR. Treatment outcomes and macular edema recurrence were compared between the groups.

Results: In the RVR group (n = 5), significant improvement was observed in four patients (three complete resolution, one partial resolution) with no macular edema recurrence. In the anti-VEGF group (n = 5), improvement occurred in two patients (one complete resolution, one partial resolution) with no recurrence. A statistically significant difference in treatment efficacy was found between the groups ($P < 0.05$).

Conclusions: RVR is a safe and effective treatment for BRVO, demonstrating significantly better outcomes than anti-VEGF therapy in this pilot study. This approach holds promise for clinical application but requires further validation with larger sample sizes to confirm long-term efficacy and safety.

Abstract No.: 200960
Rhegmatogenous Retinal Detachment (RRD) in Stickler Syndrome: A Systematic Review and Meta-analysis

*First Author: Ameen **ALKHATEEB***
*Co-Author(s): Hashem **ABU SERHAN**, Fatima R. **ALSHARIF**, Nouran **ALWISI**, Sara **IRSHAIDAT***

Purpose: Stickler syndrome is a leading syndromic cause of RRD, particularly in the pediatric population, and can rapidly lead to vision loss if left untreated. Despite this, the current literature on RRD in Stickler syndrome remains fragmented. We aimed to systematically review and meta-analyse the prevalence, prophylactic efficacy, and surgical outcomes of RRD in Stickler syndrome.

Methods: We conducted a systematic review and meta-analysis in accordance with Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines. We searched six databases and ClinicalTrials.gov from inception to June 2025. Studies reporting RRD-specific data in genetically or clinically confirmed Stickler syndrome were included. The primary outcome was RRD prevalence. Secondary outcomes included prophylactic efficacy and surgical repair success. Meta-analysis was carried out using the random-effects model, with assessment of heterogeneity, publication bias, and study quality.

Results: A total of 49 studies involving 3492 individuals were included. The pooled prevalence of RRD was 41.9% (95% confidence interval [CI]: 33.78–50.20%) in individuals and 26.1% (95% CI: 19.64–33.13%) in eyes, with higher rates in type 1 Stickler syndrome. Prophylaxis decreased the odds of RRD by 92% (95% CI: 0.04–0.17). The pooled surgical success rate was 85.5% (95% CI: 73.13–94.74), with the highest prevalence 93.60% (95% CI: 87.26–97.98%), observed in the combined scleral buckling and vitrectomy technique.

Conclusions: RRD is highly prevalent in Stickler syndrome. Prophylaxis significantly reduces this risk, while surgery remains effective. These findings support early surveillance

and prophylaxis, and larger prospective trials comparing prophylactic and surgical techniques.

Abstract No.: 200433
Sequential Serous Choroidal Detachment (SCD) in Subjects Undergoing Bilateral Trabeculectomy (BT)

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Co-Author(s): Nader ***NASSIRI****, Kourosh* ***SHEIBANI****, Maryam* ***YADGARI***

Purpose: This study aimed to assess the incidence of SCD in the second eye of patients undergoing BT and evaluate its impact on the clinical outcomes and failure rate of trabeculectomy in the second-operated eyes.

Methods: This retrospective case-control study analyzed 90 eyes of 45 patients who underwent BT. Surgical success was defined as maintaining intraocular pressure (IOP) between 5 and 21 mmHg, requiring no additional glaucoma surgery, and exhibiting a visual acuity of at least light perception. Relevant patient data, such as age, glaucoma type, systemic diseases, preoperative and postoperative IOP, and complications, were extracted from medical records.

Results: The mean age of patients was 59.8 ± 11.1 years. The five-year cumulative probability of success in the first- and second-operated eyes was 61.0% and 67.6%, respectively (log rank = 0.085, P = 0.77). Among the participants, 28.9% experienced SCD, and 76.9% of those who had SCD in the first-operated eye developed the same condition in the second eye as well (P < 0.001). In the first-operated eyes, the five-year cumulative probability of survival was 71.7% without SCD and 35.0% with SCD (log rank = 2.59, P = 0.107).

Conclusions: The occurrence of SCD in the first eye following trabeculectomy may indicate a predisposition to its development in the second eye during BT. Furthermore, the surgical success rate of the second-operated eye is comparable to the outcomes of the first eye undergoing BT.

Abstract No.: 201038
Spontaneous Retinal and Choroidal Detachment in a Child With Suspected FLNA-Related Otopalatodigital Syndrome

First Author: Jose Carlo ***ARTIAGA***
Co-Author(s): Miguel Antonio ***PASCUAL****, Anna Victoria* ***SAN PEDRO****, Lorenzo Miguel* ***TRANQUILINO***

Purpose: To report a rare case of spontaneous retinal and choroidal detachment in a pediatric male with suspected FLNA-related otopalatodigital syndrome.

Methods: A case report.

Results: A seven-year-old male with high clinical suspicion of otopalatodigital syndrome complained of blurred vision at distance. He presented with multiple congenital anomalies and a sibling with similar systemic symptoms was molecularly diagnosed with FLNA mutation. Initial fundoscopy revealed myopic fundus changes and refraction consistent with pathologic myopia. Two months later, his mother noted sudden ptosis and hypotonia in the right eye, with blurring of vision to hand movement. Examination revealed choroidal and total retinal detachment of the right eye. He immediately underwent pars plana vitrectomy and oil tamponade, with multiple retinal tears noted intraoperatively barricaded with laser. Laser indirect ophthalmoscopy was also done for an incidental horseshoe tear of the left eye. Best-corrected vision of the right eye returned to baseline. However, new-onset retinal detachments were noted bilaterally one week later, and he was scheduled to undergo bilateral encircling band and pars plana vitrectomy.

Conclusions: Retinal and choroidal involvement are not well-established in otopalatodigital syndrome. The role of Filamin A in the retina and consequent FLNA-associated connective tissue fragility in the setting of pathologic myopia presents a theoretical predisposition to rare ocular complications, such as spontaneous retinal and choroidal detachment. Genetic testing is recommended to confirm the diagnosis to help in the management, prognostication and monitoring of patients.

Abstract No.: 200925
Subretinal Injection of Indocyanine Green (ICG) Using a 25-Gauge Heavy Water Needle During Vitrectomy: A Case Report

*First Author: Shuai **SHENG***

Purpose: To report a case of inadvertent subretinal injection of ICG using a 25-gauge (G) heavy water needle during epiretinal membrane (ERM) surgery and analyze the associated risks and complications. ERM is a common retinal condition treated with vitrectomy. ICG staining is often used to visualize the internal limiting membrane. However, subretinal ICG can cause complications.

Methods: A case report of a 76-year-old female undergoing vitrectomy for ERM. Excessive injection pressure while applying ICG with a 25G heavy water needle caused ICG to breach the retina superotemporal to the macula, entering the subretinal space.

Results: The iatrogenic break self-sealed intraoperatively; residual subretinal ICG could not be aspirated. At one week postoperatively, best-corrected visual acuity (BCVA) was 0.5; ICG persisted without complete absorption; optical coherence tomography showed retinal pigment epithelial (RPE) edema. At six months, BCVA was 0.8, with focal retinal atrophy at the injection site.

Conclusions: The narrower lumen of a 25G heavy water needle carries a potential risk of creating iatrogenic breaks under excessive injection pressure. Subretinal ICG is difficult to absorb acutely, potentially causing RPE edema (indicating retinal toxicity) and leading to focal retinal atrophy in later stages. This reinforces evidence of ICG retinal toxicity. Careful dye application with minimized injection pressure is crucial. Close postoperative monitoring of vision, fundus status, and complications is essential.

Abstract No.: 200157
Subretinal Injection of Platelet-Rich Plasma for Highly Myopic Foveoschisis: Technique and Outcome

*First Author: Vadim **ZOTOV***

Purpose: To evaluate clinical and functional results of subretinal injection of platelet-rich plasma with vitrectomy in patients with highly myopic foveoschisis.

Methods: The results of three vitreoretinal interventions for myopic foveoschisis conducted between 2023 and 2024 in three patients were studied retrospectively. All patients were assigned to undergo 25-gauge vitrectomy. After internal limiting membrane peeling, platelet-rich plasma was introduced under the foveoschisis through retinopuncture. Finally, the vitreous cavity was filled with air, combined with laser photocoagulation in place of retinopuncture. All procedures were uneventful, and no intraoperative complications were observed. Patients were evaluated using best-corrected visual acuity (BCVA) and optical coherence tomography.

Results: In all cases, the necessary amount of surgical interference was completely undertaken, and a satisfactory anatomic result of surgery was achieved. Six months after surgical interference, BCVA was improved and the foveoschisis height was reduced. There were no cases of vision worsening after surgery according to the described method.

Conclusions: Vitrectomy combined with subretinal injection of platelet-rich plasma is effective in the treatment of myopic foveoschisis. Larger cohorts with longer follow-ups are, however, needed to establish the efficacy of this technique.

Abstract No.: 201109
Successful Repair of Macular Holes With Retinal Detachment (RD) Using Autologous Retinal Graft: A Case Series

*First Author: Mahesh **SHANMUGAM***
*Co-Author(s): Divyansh **MISHRA**, Kavya **S***

Purpose: To find an alternative technique to increase the success rate in chronic macular

holes larger than 400 microns that have persisted more than one year.

Methods: A retrospective study involving three patients with chronic RD who underwent pars plana vitrectomy (PPV) with autologous neurosensory subfoveal retinal transplantation for the macular holes from January 2023 to January 2025. 23-gauge PPV, perfluorocarbon liquid (PFCL) was used to flatten posterior pole, internal limiting membrane peeling was done arcade to arcade, and a full-thickness neurosensory retinal free graft, slightly larger than the macular hole, was placed under the surface of the macular holes beneath the PFCL. The case was closed with silicone oil. Patients were followed up over a period of one year with serial optical coherence tomography.

Results: All the three cases showed completely closed macular hole, and the graft fused well with the surrounding retinal tissue with good stability and durability during silicone oil extraction.

Conclusions: Underlay autograft technique is a good alternative for chronic large macular holes. However, further clinical studies and larger sample sizes with longer follow-up are required to investigate the efficacy and safety of this technique.

Abstract No.: 200397
Successful Retinal Reattachment in Proliferative Vitreoretinopathy (PVR) Using Short-Term Perfluorocarbon Liquid (PFCL) Tamponade: A Case Report

*First Author: Hiroki **KANEKO***
*Co-Author(s): Masahiro **ITO**, Maki **SUZUKI**, Nobutaka **TACHIBANA**, Masakazu **TAKAYAMA***

Purpose: To present the clinical characteristics of a case with PVR, in which retinal reattachment was successfully achieved by short-term PFCL endotamponade.

Methods: An 83-year-old woman showed globe rupture following traumatic injury and underwent scleral suturing and encircling. The condition subsequently progressed to PVR, for which vitrectomy with retinotomy and silicone oil (SO) endotamponade was performed. Four months later, recurrence of PVR with inferior retinal detachment were observed under SO endotamponade, necessitating reoperation. A second vitrectomy with PFCL endotamponade retained for two weeks was conducted.

Results: During PFCL endotamponade, optical coherence tomography showed no significant structural abnormalities. The refractive error was -5.50 D during PFCL retention, and +1.50 D after PFCL removal. Following PFCL removal, no retinal redetachment was observed, and the postoperative course has remained stable to date.

Conclusions: In this case of PVR in an elderly patient with inferior retinal detachment and sub-SO proliferation, short-term PFCL tamponade facilitated retinal reattachment without the need for postoperative positioning. Performing PFCL tamponade after the inflammation and proliferative changes subsided following the initial SO surgery may have helped avoid repeated SO injection. While further investigation is warranted, short-term PFCL tamponade may be a useful treatment option for PVR cases.

Abstract No.: 200156
Successful Treatment of Subretinal Silicone Oil (SO) Migration After Vitrectomy for Rhegmatogenous Retinal Detachment (RRD) Using a Vitreous Fluid Control (VFC) Kit: A Case Report

*First Author: Ayako **SAITO***
*Co-Author(s): Tadanobu **SATO***

Purpose: To report a rare case of subretinal SO migration following vitrectomy for RRD, successfully treated with subretinal SO removal using a VFC kit.

Methods: A 48-year-old male presented with decreased visual acuity in the left eye. His best-corrected visual acuity of the left eye was 20/2000 (logMAR 2.0), and intraocular pressure (IOL) was 9 mmHg at presentation. Fundus examination revealed a total RRD with proliferative vitreoretinopathy, associated with a small inferior peripheral retinal break. Initial management included scleral buckling and

intravitreal injection of sulfur hexafluoride gas. Due to persistent subretinal fluid, a second surgery was performed using 25-gauge (G) pars plana vitrectomy, which involved induction of posterior vitreous detachment, removal of subretinal strands, silicone IOL removal, perfluorocarbon liquid (PFCL) injection, fluid-air exchange, laser photocoagulation, and SO tamponade. Subretinal migration of SO was observed on postoperative day 7.

Results: A third vitrectomy was conducted to remove the subretinal SO. A retinal incision was created at a location enabling direct access from the nasal trocar site. The 25G cutter failed to aspirate the SO; however, successful removal was achieved using the VFC kit. PFCL injection, fluid-air exchange, laser photocoagulation, and SO reinjection were performed. The retina remained attached postoperatively. SO removal and intrascleral fixation of the intraocular lens were performed six months later without complications.

Conclusions: Subretinal migration of SO is a rare complication that may require innovative intraocular approaches for effective management. This case highlights the importance of strategic planning and the utility of VFC-assisted techniques in achieving successful anatomical outcomes.

Abstract No.: 201242
Surgical Management of a Rare Case of Double Optic Disc Pit (ODP) Maculopathy in a Young Adult

First Author: Tarun ***PATIDAR***
Co-Author(s): ***J S BHALLA****, Sadiqua* ***KHATOON****, Ridhima* ***SAKHUJA***

Purpose: To present a rare case of double ODP associated with maculopathy and its surgical management.

Methods: A 28-year-old male presented with gradual, painless vision loss, and metamorphopsia in the left eye for one year. Fundus examination revealed an enlarged optic disc with two distinct greyish pits located at the inferotemporal and temporal aspects. Optical coherence tomography (OCT) showed inner retinal schitic cavities, subretinal fluid, and a ruptured inner retinal cyst. The condition did not improve with medical therapy. Surgical intervention included 23-gauge pars plana vitrectomy, induction of posterior vitreous detachment, internal limiting membrane peeling and flap stuffing into the disc pits, endolaser photocoagulation, fluid-air exchange, and C3F8 gas tamponade.

Results: Postoperative OCT at one month showed complete resolution of intraretinal fluid and significant reduction in subretinal fluid. Central macular thickness improved from 847 µm preoperatively to 497 µm postoperatively. Best-corrected visual acuity improved from finger counting at two meters to 6/60.

Conclusions: Double ODPs are extremely rare and pose both diagnostic and therapeutic challenges. In this case, tailored surgical management led to significant anatomical improvement and partial visual recovery. Early recognition and intervention are key in preventing irreversible vision loss in ODP maculopathy.

Abstract No.: 200182
Surgical Outcome of Retinal Detachment (RD) With Choroidal Coloboma in Peripheral Eye Care Facility in Nepal

First Author: Nitin Kumar ***TULSYAN***

Purpose: To study the anatomical and visual outcomes of surgery for RD in patients with choroidal coloboma. Anatomical success was defined as attachment of the sensory retina to the retinal pigment epithelium without residual subretinal fluid. Visual success is defined as an improvement in the postoperative visual acuity of at least one or more Snellen lines over preoperative acuity.

Methods: Thirty eyes of 30 patients underwent surgery for RD with choroidal coloboma. Patients were divided into three groups, according to the extent of choroidal coloboma: Coloboma not involving the disc and macula (Group A), coloboma involving the disc and

macula (Group B), and coloboma involving the disc (Group C).

Results: After a mean follow-up of six months, 24 eyes (80%) had an attached retina and six eyes (20%) had recurrent RD. Twenty-four eyes (80%) recovered ≥6/60 in visual acuity (VA). The final median VA in Group A (6/60) was better than in Group C (3/60) and Group B (light perception and hand movement), which was statistically significant (P = 0.01).

Conclusions: Postoperative visual recovery in RD with choroidal coloboma is dependent upon the involvement of the disc and macula with the colobomatous area.

Abstract No.: 200845
Surgical Outcomes of Pars Plana Vitrectomy (PPV) in Primarily Repaired Open Globe Injury Patients in a Tertiary Eye Care Hospital of Bangladesh

*First Author: Mowsumi **CHOWDHURY***
*Co-Author(s): Mohammad Aminur **RAHMAN***

Purpose: A significant proportion of traumatic injuries are complex, often requiring vitreoretinal intervention to preserve vision. A retrospective analysis at a tertiary eye care center was performed to evaluate outcomes following PPV after traumatic ocular injury and initial globe repair.

Methods: This observational study investigated all eyes that underwent PPV, after open globe injury repair following ocular trauma, at Chittagong Eye Infirmary and Training Complex between January 2021 and September 2024 were analyzed. Surgical outcomes, effect of zone of injury in final visual acuity, and comparison of study visual outcome with Ocular Trama Score (OTS) prediction were assessed.

Results: In total, 47 eyes that were initially repaired for open globe injury undergone PPV. The average time to vitrectomy was 15 days after initial open globe injury repair. Indications of PPV after initial open globe injury repair were more likely to have as persisting media opacity (n = 31, 66%), perforating injuries (n = 2, 4%), retinal detachment (n = 4, 9%), intraocular foreign body (n = 15, 32%), endophthalmitis (n = 11, 23%), and dropped nucleus (n = 2, 4%). Eyes that underwent PPV showed statistically significant improvement in average visual acuity logMAR 2.19 ± 0.56 at presentation, compared to 0.97 ± 0.63 at the final follow-up, P < 0.0000.

Conclusions: Despite substantial ocular comorbidities, meticulous and well planned vitreoretinal intervention can result in good visual outcomes in even the most severe cases of open globe injury cases.

Abstract No.: 201395
Surgical Outcomes of Submacular Hemorrhage (SMH) Treated With Pars Plana Vitrectomy (PPV) and Subretinal Injection of Tissue Plasminogen Activator (tPA)

*First Author: Boon Lin **TEH***
*Co-Author(s): Fong May **CHEW**, Akash **DHARNI**, Blanca **FLORES-SANCHEZ***

Purpose: To evaluate surgical outcomes of SMH over a 10-year period.

Methods: A single-center, retrospective study conducted at the vitreoretinal department of the Royal Hallamshire Hospital, UK. Clinical records of patients presenting with acute SMH between 2015 and 2025 were reviewed. Inclusion criteria were: SMH involving the fovea, treatment with PPV and subretinal injection of tPA, and a minimum follow-up of two months. Primary outcomes included change in visual acuity (VA), displacement of SMH, reduction in central retinal thickness (CRT), and surgical complications.

Results: Eighty eyes met the inclusion criteria. Median time from symptom onset to surgery was seven days. SMH were categorised into three groups for analysis: small, large and massive. A 25-gauge PPV was performed in 85% of cases, and gas tamponade was used in 98%. Displacement of blood away from the fovea was achieved in 89% (n = 71/80) of cases, with only nine eyes showing persistent SMH. The mean CRT significantly reduced from of 914 µm (95% confidence interval [CI]: 839–988) at presentation to 422 µm (95% CI: 373–472) postoperatively (P < 0.001). Median baseline VA was 1.8 logMAR, improving to 1.3 logMAR

postoperatively (median gain of 0.44 logMAR; P < 0.001, 95% CI: 0.0–0.5). Multivariate logistic regression model (AUC 0.83) demonstrated that each additional day of surgical delay reduced the odds of achieving VA of 1.0 logMAR or better by 13% (coefficient –0.135, P = 0.01).

Conclusions: PPV with subretinal tPA is effective for displacing SMH, reducing macular thickness and improving vision.

Abstract No.: 200260
Surgical Repair of Retinal Detachment in Ocular Coloboma: Overcoming Anatomical Challenges

*First Author: Jesus Jacinto **BAUTISTA***
*Co-Author(s): Francis Ezra **LAXAMANA***

Purpose: To report the surgical challenges and adaptive techniques employed in repairing rhegmatogenous retinal detachment (RRD) in an eye with iris and retinal coloboma, highlighting the impact of knowledge of anatomy on vitreoretinal surgery.

Methods: A 28-year-old female with bilateral iris and retinal colobomas presented with sudden vision loss in the right eye due to total RRD with an unidentified break. Pars plana vitrectomy revealed absent nasal pars plana, abnormal rectus muscle insertions, and distorted vitreous base anatomy. Surgical adaptations included modified sclerotomy placement, perfluorocarbon-assisted break localization, endolaser around the coloboma margin, and silicone oil tamponade.

Results: The retina was attached postoperatively. The key challenges included limited peripheral access due to abnormal muscle anatomy and iatrogenic break risk in atrophic coloboma-adjacent retina. Silicone oil provided effective stabilization despite these constraints.

Conclusions: Coloboma-associated RRD demands tailored surgical strategies to address anatomical variants. Preoperative planning for pars plana anomalies, intraoperative flexibility in sclerotomy placement, and long-term tamponade are critical for success. This case underscores the need for heightened awareness of ocular malformations in young patients presenting with retinal detachment.

Abstract No.: 201275
The Gentle Rise: Pneumatic Retinopexy Displacement for Submacular Hemorrhage in a Silent Polypoidal Eye

*First Author: Adriel Vincent **TE***
*Co-Author(s): Esther Carmen Arvella **EREÑO**, Alfonso Gabriel **VEGA***

Purpose: To report a case of an idiopathic polypoidal choroidal vasculopathy in a 56-year-old female who underwent pneumatic retinopexy displacement and intravitreal injection (IVI) of faricimab with improved vision.

Methods: A 56-year-old hypertensive female consulted for a superior hemifield defect in the left eye with a best-corrected visual acuity (BCVA) of 20/400. Visual acuity on the right eye is 20/25, with unremarkable slit-lamp findings for both. Fundoscopy showed a large submacular hemorrhage of the left eye. Macular optical coherence tomography (OCT) showed two prominent dome-shaped hyporeflective elevations at the level of the sub-retinal pigment epithelium with acoustic shadowing suggestive of pigment epithelial detachment, with adjacent neurosensory retinal detachment.

Results: Pneumatic retinopexy displacement was performed for the large submacular hemorrhage, followed by five-monthly IVI of faricimab. A repeat OCT performed six months postprocedure showed resolution of the dome-shaped elevations throughout the macula and reattachment of the inner retinal layers. At the end of the treatment course, the patient's BCVA improved to 20/50 in the left eye.

Conclusions: Polypoidal choroidal vasculopathy (PCV), though generally uncommon, has a higher prevalence in Asian females in the 50-65 demographic. One of its complications includes submacular hemorrhage, which can cause profound vision loss. Pneumatic displacement (PD) moves blood away from the fovea, further enhancing the effectiveness of another common treatment in PCV--- IVI of anti–vascular endothelial growth factor.

Studies show that inflammatory cytokines and angiogenic biomarkers were higher in eyes with PCV. Faricimab, which targets both, was used. A combination therapy of faricimab and pneumatic displacement proved effective and should be studied further.

Abstract No.: 201132
The Role of Internal Limiting Membrane (ILM) Peeling in Reducing Epiretinal Membrane (ERM) Formation After Pars Plana Vitrectomy (PPV) for Diabetic Tractional Retinal Detachment (TRD): A Systematic Review and Meta-Analysis

First Author: Maria Lourdes ***NANAGAS-PAGKATIPUNAN***
Co-Author(s): Maijann ***PRECIA***

Purpose: To evaluate the effectiveness of ILM peeling in reducing the incidence of postoperative ERM formation among patients who underwent PPV for diabetic TRD.

Methods: A systematic review and meta-analysis was conducted using PubMed, PubMed Central, Cochrane Library, and Google Scholar. Studies comparing PPV with ILM peeling versus without ILM peeling in diabetic TRD patients and reporting ERM incidence were included. The pooled odds ratio (OR) and 95% confidence intervals (CI) were calculated using a random-effects model. Risk of bias was assessed using Cochrane RoB 2 and ROBINS-I tools.

Results: Four studies comprising 197 eyes were included. ILM peeling was associated with a significantly lower incidence of postoperative ERM formation (pooled log OR: -2.39; 95% CI: -3.39 to -1.39; $P < 0.001$). Heterogeneity was low ($I^2 = 9.23\%$). Funnel plot analysis suggested minimal publication bias. One randomized controlled trial had a low risk of bias, while the three observational studies showed moderate risk due to confounding.

Conclusions: ILM peeling during vitrectomy for diabetic TRD significantly reduces the incidence of postoperative ERM formation and may improve anatomical outcomes. Its integration into surgical protocols should be considered, particularly in cases with macular involvement. Further multicenter, randomized trials with long-term follow-up are recommended to validate these findings and assess functional outcomes.

Abstract No.: 201341
Timing of Epiretinal Membrane (ERM) Development as a Predictor of Vitrectomy Outcomes in Retinal Vein Occlusion (RVO)

First Author: Yoon Jeon ***KIM***
Co-Author(s): Woojung ***CHAE***

Purpose: To compare the anatomical and functional outcomes of ERM surgery in eyes with ERM associated with RVO, based on whether the ERM developed before of after the onset of RVO, and to analyze the clinical factors influencing postoperative prognosis.

Methods: This retrospective, single-center patients with macula-involving RVO who underwent ERM surgery between January 2020 and December 2024. Patients were categorized into two groups; Group 1 with preexisting ERM before RVO; and Group 2 with ERM developing after RVO onset. Baseline demographics, clinical characteristics, and optical coherence tomography (OCT) findings were reviewed. Best-corrected macular thickness (CMT) was assessed for 24 months postoperatively.

Results: A total of 46 eyes were included (Group 1: n = 17; Gorup 2; n = 29). Both groups showed significant BCVA improvement (Group 1: $P = 0.019$; Group 2: $P = 0.044$). CMT reduction was significantly greater in Group 1 ($P = 0.031$). Postoperative OCT analysis, inner nuclear layer microcyst ($P = 0.059$), disorganization of the retinal inner layers (DRIL, $P = 0.000$), external limiting membrane/ellipsoid zone disruption ($P = 0.004$), and subretinal fluid ($P = 0.038$) were more frequently observed in Group 2.

Conclusions: This study demonstrates that, in eyes undergoing surgery for ERM associated with RVO, the anatomical and functional outcomes, as well as the need for postoperative treatment, differ significantly depending on the timing of ERM development. Therefore, whether the ERM developed before or after

the onset of RVO should be considered as an important prognostic factor when determining the surgical intervention.

Abstract No.: 200239
Viscoat-Assisted Inverted Internal Limiting Membrane (ILM) Flap Technique for Macular Hole Surgery – No Gas, No Positioning

*First Author: Sangeet **MITTAL***

Purpose: The inverted ILM flap technique is an established method for macular hole repair, but conventional approaches require gas tamponade and postoperative positioning, which can be challenging for patients. This study evaluates a modified dispersive visco-assisted technique that eliminates both, aiming to maintain surgical efficacy while improving patient comfort, compliance, and recovery.

Methods: A retrospective analysis included 29 eyes that underwent the visco-assisted inverted ILM flap technique. After vitrectomy, cabbage-type ILM flaps were raised and positioned over the macular hole by tilting the eye. Dispersive visco was used to flatten the flaps, and patients were instructed to lie supine for one hour, with no further postoperative positioning. The mean preoperative hole diameter was 389 microns. Best-corrected visual acuity (BCVA) was assessed preoperatively and postoperatively, and closure patterns were classified as Type 1 or Type 2, with retinal pigment epithelium (RPE) changes documented.

Results: Postoperative BCVA showed significant improvement, with a mean enhancement from 6/60 to 6/18. Anatomical closure was successful in 27 eyes (Type 1), while 2 eyes exhibited Type 2 closure. Minimal RPE atrophy was observed in three cases. The absence of gas tamponade and postoperative positioning did not compromise surgical efficacy, highlighting the benefits of this technique.

Conclusions: The visco-assisted inverted ILM flap technique achieves favorable visual and anatomical outcomes while minimizing patient discomfort and expediting recovery. This approach offers a promising alternative for macular hole repair without the drawbacks of the conventional method.

Abstract No.: 200181
Visual Outcomes of Adult Patients With Epiretinal Membrane (ERM) Treated With Combined Vitrectomy and Intravitreal Dexamethasone (IVD): A Systematic Review and Meta-analysis of Randomized Controlled Trials (RCTs)

*First Author: Carlo Antonino **NASOL***
*Co-Author(s): Roberto Luis **FRANCO***

Purpose: The purpose of this systematic review and meta-analysis was to assess the visual and anatomical results of adult patients with ERM treated with combination vitrectomy and IVD implantation against standalone vitrectomy.

Methods: A comprehensive search of PubMed, Cochrane Central, Google Scholar, and HERDIN was undertaken in accordance with PRISMA recommendations. Only RCTs that compared combined vitrectomy and IVD implantation versus standalone vitrectomy were considered. The primary outcomes evaluated were best-corrected visual acuity (BCVA) and central retinal thickness (CRT). A random-effects model was used for the meta-analysis. Studies reviewed and assessed using Cochrane Risk of Bias assessment tool for RCTs.

Results: Three RCTs (n = 181 eyes) fulfilled the inclusion criteria. The study indicated that at three months, the combination treatment group had a considerably higher reduction in CRT than standalone vitrectomy (overall mean difference of -19.63 [-37.84, -1.42]). However, there were no significant differences in BCVA improvement at one (overall mean difference of -0.02 [-0.12, 0.07]), three (overall mean difference of -0.05 [-0.14, 0.04]), or six (overall mean difference of -0.07 [-0.21, 0.06]) months after surgery. The six-month follow-up revealed heterogeneity in CRT reduction (I^2 = 81.13%, $P < 0.05$). While structural improvements were evident at three months, practical advantages in visual acuity remained unclear.

Conclusions: Combining vitrectomy with IVD implantation efficiently reduces CRT but does

not significantly improve short-term visual acuity. The findings suggest that IVD may play a role in regulating postoperative inflammation and edema, but long-term visual outcomes warrant further exploration.

Abstract No.: 200151
Vitrectomy With Internal Limiting Membrane (ILM) Peeling in Diabetic Macular Edema With Plaque-like Subfoveal Hard Exudates

*First Author: Sangeet **MITTAL***

Purpose: Exudative diabetic maculopathy is a common cause of severe and irreversible visual loss in patients with diabetic retinopathy. Plaque-like subfoveal hard exudates usually respond poorly to focal laser treatment. Vitrectomy helps remove tractional forces at the retinal surface, reduces the oxygen consumption of vitreous, and decreases the load of vascular endothelial growth factor. Surgical excision of hard exudates is technically demanding and complicated. We analyze the efficacy of vitrectomy with ILM peeling alone in the treatment of plaque-like subfoveal hard exudates.

Methods: A retrospective review of the records of 993 eyes which had undergone vitrectomy for complications of diabetic retinopathy was done. Seventy-four eyes of 72 patients with plaque-like subfoveal hard exudates that underwent standard three-port pars plana vitrectomy (25-gauge) combined with ILM peeling were analyzed. All patients were under strict metabolic control for at least six weeks before the surgery. Only patients who had completed six months of follow-up were included in the study. Outcome measures evaluated included visual acuity, size of plaque-like exudates, and surgical complications.

Results: The mean age of patients was 51.6 ± 8.7 years. There were 38 males and 36 females. The mean follow-up was 15.5 months. The mean visual acuity improved from 5/60 to 6/24. Improvement in visual acuity was seen in 54 out of 74 eyes. Twenty-two patients had total resorption of hard exudates, and 52 patients had partial absorption.

Conclusions: Vitrectomy with ILM peeling is a simple and effective option in the management of exudative diabetic maculopathy with plaque-like subfoveal hard exudates.

Translational Medicine

Abstract No.: 201056
Automated Generation of Ophthalmology Reports and Diagnosis Based on Pretrained and Fine-Tuning Technology

*First Author: Ningli **WANG***
*Co-Author(s): Yang **LIU**, Hao **WEI**, Jian **WU**, Wu **YUAN***

Purpose: Multimodal large language models (MLLM) show health care potential. This study develops an end-to-end multimodal ophthalmic dialogue model to address issues, such as doctor-patient communication barriers and delayed evaluation, aiding high-quality report generation, report interpretation, and early screening.

Methods: A large-scale ophthalmic multimodal dataset (public and clinical data) was built. Training involved pretraining (image-text alignment and deep feature extraction) and fine-tuning (transferring pretrained features via transfer learning). The best model was used for report generation and diagnosis.

Results: The dataset is divided into training and test sets with an 80:20 ratio, where the test set was used for performance evaluation of the model. A test was conducted by feeding an image of a patient with central serous chorioretinopathy into the model, and the results confirmed that the model accurately identified the disease. Furthermore, the report generated by the model highlighted the presence of blurred foveal reflection, cystoid macular edema, and diffuse macular exudation, which indicates a reasonable degree of diagnostic accuracy.

Conclusions: In this study, a large-scale ophthalmic image-text dialogue dataset is constructed for model training. The model employed pretraining, which included

alignment and feature extraction in order to capture deep image-text interactions. The fine-tuning model followed by the pretraining is to automate the generation of ophthalmic diagnostic images and reports. This framework contributes to reducing the differences in report writing between junior and senior physicians and enhances the ability of patients to comprehend their reports.

Abstract No.: 200285
Deep Learning–Based Cross-Modality Transformation From Ultra-Widefield Color Fundus Photographs (UWF-CFP) to UWF Fluorescein Angiography (UWF-FA) in Diabetic Retinopathy (DR)

*First Author: Dan **CAO***

Purpose: To develop a deep learning–based cross-modal translation model to generate UWF-FA from UWF-CFP for DR patients.

Methods: Patients diagnosed with DR at Guangdong Provincial People's Hospital from January 2023 to December 2024 were enrolled, and a total of 270 pairs of UWF-CFP and UWF-FA images were collected. First, nnU-Net was employed to perform vessel segmentation on the image pairs. Subsequently, a self-supervised keypoint detection framework based on U-Net was constructed to achieve precise registration of the image pairs. Finally, through deep improvements to the pix2pixHD model (a generative adversarial network, GAN), a cross-modal translation model for DR, named UWFDR-GAN, was developed. The generation performance of the model was quantitatively evaluated using objective metrics.

Results: In terms of registration, the self-supervised keypoint detection framework achieved more accurate spatial alignment of UWF-CFP and UWF-FA compared to traditional methods. For image generation, the UWF-FA synthesized by UWFDR-GAN closely approximated real images and significantly outperformed existing models such as pix2pix, pix2pixHD, and UWAFA-GAN. Quantitative evaluation results demonstrated that UWFDR-GAN achieved a multi-scale structural similarity index (MS-SSIM) of 0.7214, peak signal-to-noise ratio (PSNR) of 20.00, Fréchet inception distance (FID) of 77.48, and inception score (IS) of 1.0123. Additionally, UWFDR-GAN showed excellent performance in generating detailed features of local lesions, such as neovascularization and nonperfusion areas.

Conclusions: We developed UWFDR-GAN, a cross-modal translation model for DR, achieving high-quality synthesis from UWF-CFP to UWF-FA. This model provides a noninvasive ultra-widefield vascular assessment solution for clinical DR management.

Abstract No.: 201026
Prediabetes-Derived Non-Coding Ribonucleic Acid Molecules (ncRNAs) Protect Retinal Pigment Epithelial (RPE) Cells During Diabetic Pathogenesis by Targeting Autophagy

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*Co-Author(s): Hung-da **CHOU**, Tung-wei **HSU**, Yen-hao **SU**, Po-chen **TSENG***

Purpose: Diabetes mellitus (DM) is a progressive and incurable disease with rising prevalence and major health burdens. Diabetic retinopathy (DR) is a leading cause of blindness, yet its regulatory mechanisms remain unclear. Autophagy, a stress-induced homeostatic process, is protective at baseline but may trigger cell death when overactivated. Evidence suggests autophagy is reduced in prediabetes (PreDM) but overactivated in DM, implicating temporal dysregulation during disease progression. ncRNAs are increasingly recognized as modulators of autophagy and cell survival.

Methods: We hypothesize that PreDM-derived ncRNAs confer compensatory protection in RPE cells by modulating autophagy. In normal RPE cells, high-glucose exposure decreased cell viability and increased reactive oxygen species (ROS) in a time-dependent manner. Short-term high glucose enhanced pro-survival proteins (p-PI3K, p-Akt, and BCL-2), while long-term exposure induced apoptotic markers and ROS accumulation.

Results: Notably, autophagy-related proteins were suppressed in short-term but elevated in long-term glucose treatment. Candidate ncRNAs were identified that correlate with ROS and autophagy regulation.

Conclusions: These findings suggest that PreDM-associated ncRNAs protect RPE cells by fine-tuning autophagy, highlighting their potential as biomarkers and therapeutic targets for DR.

Abstract No.: 200926
Recapitulating Native Retinal Pigment Epithelium (RPE) Metabolism With Lactate Promotes Oxidative Resilience in Stem Cell–Derived Cultures

First Author: Xinyi ***SU***
Co-Author(s): Mayuri ***BHARGAVA****, Bhav* ***PARIKH****, Vinod* ***SELVAN***

Purpose: Native RPE cells rely primarily on oxidative metabolism, utilizing lactate and fatty acids from the neural retina rather than glucose. However, standard in vitro culture systems use glucose-rich media, which shifts RPE cells toward glycolysis and limits their oxidative potential. To better replicate the in vivo metabolic environment, we developed a modified culture system using lactate as the primary energy substrate for stem cell–derived RPE (SC-RPE).

Methods: Human embryonic stem cells (hESCs) were differentiated into RPE using a patented protocol and cultured for one month in glucose-free media supplemented with 20 mM sodium lactate. Standard glucose (10 mM) cultures served as controls. We assessed RPE identity through gene expression and protein localization, and evaluated bioenergetic profiles under basal and oxidative stress conditions using the Seahorse assay.

Results: Lactate-cultured SC-RPE retained characteristic cobblestone morphology and expressed key RPE-specific markers comparable to glucose-cultured cells. Importantly, these cells demonstrated enhanced mitochondrial function, increased resistance to oxidative stress, and upregulation of antioxidant genes, indicating a more robust and physiologically relevant metabolic state.

Conclusions: This study establishes a lactate-based culture system that better mimics native RPE metabolism, producing SC-RPE cells with improved bioenergetic resilience. These findings have significant implications for disease modelling and therapeutic development, particularly for conditions such as age-related macular degeneration, where mitochondrial dysfunction plays a central role. By recapitulating native metabolic conditions, this platform offers a more accurate and functional model for translational retinal research.

Abstract No.: 200526
Rigid Intraocular Lenses (IOL) Intrascleral Tuck Fixation (RIT-FIX) Technique for Aphakia: A Pilot Study on a Low-Cost, Sutureless Solution in a Resource-Limited Tertiary Eye Care Setting

First Author: Pallavi ***RAJ***
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Purpose: To evaluate the feasibility, anatomical stability, and visual outcomes of a novel, low-cost, sutureless scleral fixation technique using rigid polymethylmethacrylate (PMMA) IOLs in aphakic patients with inadequate capsular support, in a resource-constrained tertiary eye care setting.

Methods: This prospective pilot study included 18 aphakic eyes of 17 patients who underwent secondary IOL implantation using the RIT-FIX technique between July 2024 and March 2025 at a government tertiary care hospital. A three-piece rigid PMMA IOL was fixated intrasclerally via partial-thickness scleral tunnels without the use of glue, sutures, or cauterization. Postoperative evaluations were conducted on day 1, week 1, month 1, and month 3. Primary outcomes included IOL centration and best-corrected visual acuity (BCVA); secondary outcomes included surgically induced astigmatism and postoperative complications.

Results: All 18 eyes (100%) demonstrated well-centered, stable IOLs without decentration

or gross tilt at three months. The mean preoperative BCVA was 1.12 ± 0.22 logMAR, which improved significantly to 0.36 ± 0.18 logMAR at three months (P < 0.001, Wilcoxon signed-rank test). The mean postoperative astigmatism was 1.38 ± 0.60 diopters, with no significant increase from baseline (P = 0.21)

Conclusions: The RIT-FIX technique exemplifies late-stage translational innovation, adapting existing IOL fixation methods for high-impact, cost-effective application in resource-constrained clinical environments. As a pilot study, these encouraging early results support the feasibility of this approach and warrant further validation through larger, controlled clinical trials in similar resource-limited settings.

Abstract No.: 200908
Variability of Foveal Avascular Zone (FAZ) Measurements Among Filipino Eyes Using Optical Coherence Tomography Angiography (OCTA)

First Author: Carlo Antonino ***NASOL***
Co-Author(s): Roberto Luis ***FRANCO***

Purpose: To determine the FAZ thickness and other FAZ measurements in the eyes of healthy Filipino adults aged 20-49 years.

Methods: This single-center, cross-sectional, observational study evaluated 186 subjects (372 eyes) of Filipino adults 20 to 49 years of age. Using Angioplex, the automated software of the OCTA machine, the FAZ area, perimeter, circularity, vascular density, and perfusion in the superficial FAZ were recognized. Statistical analysis was done using SPSS version 23. The mean and standard deviation of the values of superficial capillary free zone measurements were calculated.

Results: The mean FAZ area was 0.297 ± 0.112 mm^2, the mean circularity was 0.667 ± 0.080, and the mean perimeter was 2.316 ± 0.80 mm. These parameters were all larger in the female population (P < 0.001, P = 0.043, and P < 0.001, respectively). The mean vessel density and vessel perfusion central were 9.767 ± 3.470 mm/mm^2 and 17.008 ± 6.457%; both were significantly lower in the female population (P = 0.005 and P = 0.003). The mean central macular thickness (CMT) was 245.895 ± 20.769 µm. CMT was noted to be higher in the male population (P < 0.001). The CMT was directly correlated with age (P = 0.024).

Conclusions: In the eyes of healthy Filipino adults aged 20-49 years, females exhibited larger FAZ area, higher circularity, and lower CMT, compared to males. Additionally, females displayed lower central vessel density and perfusion. While the FAZ area and perimeter remained stable with age, circularity decreased, and CMT increased.

PAO

Cataract & Refractive Surgery

Abstract No.: 201350
Bilateral Retinal Vein Occlusion: A Case Presentation

*First Author: Eleonore **IGUBAN***
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Purpose: To to present a case of a 50 year old female diagnosed with bilateral branch vein occlusion at the outpatient department, showcasing findings as well as key points for proper management of atypical cases of BRVO.

Methods: History was taken and physical examination done, revealing BCVA of OD 6/20 and OS 6/7.5 with no RAPD and normal intraocular pressures. Striking posterior pole findings included sclerosed vessels inferotemporally in the right eye and superotemporally in the left - both with neovascularization, pre-retinal hemorrhage and sclerosed vessels denoting bilateral branch retinal vein occlusion.

Results: Patient underwent fungus photography and fluorescein angiography, confirming the previous posterior pole findings. She then underwent urgent sectoral photocoagulation of the ischemic branches bilaterally. On later follow ups, we noted improvement in VA OD from 6/20 to 6/15 with none in OS. Complete investigation showed that in addition to hypertension, she had trace amounts of protein in her urinalysis and elevated triglycerides. Exploration of possible hyper coagulable states included ESR, ANA, CRP, Liver Enzymes as well as a whole abdominal ultrasound - all of which revealed normal results. Patient was also for anti-VEGF injection, but she was no longer amenable to further management and was lost to follow up.

Conclusions: Atypical forms of BRVO, occurring in younger age, in non-superotemporal locations or bilaterally, warrant further investigations as well as addressing underlying systemic causes. Key points in patient history, such as hypercoagulability, inflammatory diseases or recent COVID disease and vaccination may provide a focus for atypical disease.

Abstract No.: 201024
Evaluation of Sub Tenon's Block using 26G Needle in Routine cataract Surgery

*First Author: Shah Md.Bulbul **ISLAM***
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Purpose: Evaluating subtenon's block during routine phacoemulsification surgery.

Methods: This cross-sectional observational study was done from March 2021 to December 2021. Pre-operative and post-operative visual acuity, IOP, per-operative pain, complications of subtenon's anesthesia and duration of surgery were noted. All the patients underwent temporal approach Phacoemulsification with PCIOL by a single surgeon.

Results: Out of 50 patients 60% were male. Mean age was 57.6±9.07 (22-78) years. There was significant improvement of visual acuity from 0.17±0.084 to 0.73±0.16 in decimal ($p<0.001$). IOP was significantly lower (13.12±1.51 vs 10.74±1.34 mm Hg) in the post-operative period ($p<0.001$). 76% patients complained of discomfort during the block. Per-operatively there were no complains. Subconjunctival hemorrhage occurred in 4% and chemosis in 6%. Sudden spike of blood pressure occurred in 4%. Duration of surgery was 19.36±4.21 (13-32) minutes. Two patients needed eye patching for 02 hours following surgery

Conclusions: Subtenon's block using a 26G needle carefully is an effective and safe technique for routine cataract surgery. It minimizes complications and maximizes surgeons' and patients' comfort. It can also be used to augment cases done under topical anesthesia when patients feel discomfort. It is an excellent technique that can be utilized by surgeons switching over to topical surgery from regional block.

Abstract No.: 200607
New Game Mode Unlocked: A Senior Resident's Experience with 3D Phacoemulsification

*First Author: Bernardita **NAVARRO***
*Co-Author(s): Carlo **NASOL**, Jose Martin Iv **VELASCO***

Purpose: To share a first hand on the differences in phacoemulsification using the 3-D Ngenuity 3D Visualization system vs the standard experience using a microscope.

Methods: A first hand account experience is shared

Results: In my recent experience using the NGENUITY® 3D Visualization System for cataract surgery, I found that it offers a distinct shift from the conventional binocular microscope. The system projects a high-definition, stereoscopic 3D image on a large monitor, allowing me to operate in a heads-up position while wearing polarized glasses similar to when playing video-games when I was younger. This configuration significantly reduced physical strain, particularly in the neck and upper back. I found the ability to apply digital enhancement modes, such as Tissue Detail Mode and Capsule Clarity Mode, particularly helpful in visualizing fine intraocular structures. The shared display also enabled improved communication within the surgical team and enhanced the educational experience for observers. However, there was a noticeable learning curve. I had to adjust to managing depth of focus manually—especially during key steps such as sculpting the nucleus or implanting the intraocular lens. For example, during nuclear sculpting, I had to refocus as I transitioned from the anterior lens to deeper layers. Similarly, during IOL insertion, I needed to shift focus from the corneal incision to the posterior capsule.

Conclusions: Overall, with continued use, I believe the NGENUITY system has the potential to be an excellent alternative option for surgeons in training to further hone their skills. Just like with anything, practice makes perfect.

Abstract No.: 200608
Through a 3D-Looking Glass

*First Author: Berdardita **NAVARRO***
*Co-Author(s): Julianne Nicole **CHAM**, Carlo **NASOL***

Purpose: To detail my first-hand experience on using the Ingenuity 3D Visualization System as a surgeon who underwent refractive surgery

Methods: First-hand experience on phacoemulsification sharing on the Ingenuity 3D Visualization System

Results: As a firsthand user who has undergone refractive surgery, I had the opportunity to explore the Ingenuity 3D Visualization System during cataract procedures from a unique perspective. My experience revealed that while the 3D system provides markedly sharper and clearer images than those of conventional microscopes, it comes with notable ergonomic and perceptual differences that require adaptation. One particular challenge is the field of defocus; elements outside the focal plane often appear as ghosted or double images, causing mild but persistent visual discomfort, especially in those with surgically enhanced visual acuity. This underscores the need for surgeons to undergo a period of adjustment to fully benefit from the technology. The learning curve includes mastering posture, depth perception, and fine-tuning system settings to suit individual preferences and case demands. Among the available enhancements, I found the Blue Light Boost mode particularly helpful during capsulorrhexis, significantly improving visualization of the anterior capsule. For phacoemulsification, the standard visualization mode at default settings was sufficient, offering reliable image quality and depth clarity.

Conclusions: Overall, the Ingenuity system offers a powerful and immersive surgical platform, but it demands an initial investment in time and adaptation. Surgeons—especially those with prior refractive procedures—may experience the visual nuances more acutely and should approach this transition with patience and openness to customization.

Cornea & ED

Abstract No.: 200577
A Case Report on an Atypical Case of Epidemic Keratoconjunctivitis in a Pediatric Patient Admitted in a Tertiary Hospital in Manila, Philippines

*First Author: Cristina **TAN***
*Co-Author(s): Isabella **BONDOC***

Purpose: Epidemic keratoconjunctivitis (EKC) is a highly contagious disease with no effective treatment, with severe cases of EKC causing corneal epithelial lesions, inflammation and severe eye pain lasting for more than 2 weeks. These cases are especially difficult to manage in the pediatric population, wherein physical examination and supportive management may be a challenge. This case report aims to guide and support health care practitioners and ophthalmologists in making appropriate decisions in the management and care of pediatric patients with severe EKC.

Methods: An 8-year-old female with a two week history of eye pain and redness, previously treated with combination topical antibiotics and steroids (Levofloxacin+ Dexamethasone), was admitted due to swollen lids and inability to open her eyes. Frequent cold compress, as well as topical Moxifloxacin, Prednisolone acetate, and Preservative Free lubricating drops were administered. She also underwent corneal filament removal and conjunctival membrane peeling with 5% povidone-iodine wash under general anesthesia. Gram stain and culture were also done.

Results: Supportive management regimen through membrane peeling under general anesthesia, cold compress, topical steroids, antibiotics, and povidone iodine wash was effective in alleviating patient symptoms in 1 week, with gradual improvement of eye pain.

Conclusions: Management of EKC in the pediatric population creates challenges from the history taking to the physical exam and supportive management for the patient. More pediatric case studies should be brought forward to guide ophthalmologists and the healthcare team in providing optimal management for best outcomes and comfort for the child.

Abstract No.: 201158
A Case of Trichomonascus ciferrii Keratitis in an Immunocompetent Adult

*First Author: Ruben **LIM BON SIONG***
*Co-Author(s): Pierre Aldwin **ARCEO**, Richard **NEPOMUCENO**, George Michael **SOSUAN**, Patricia Kaye **SY***

Purpose: Fungal keratitis is a serious ocular infection that can result in permanent vision loss if not promptly diagnosed and treated. It is commonly caused by filamentous fungi following trauma in tropical countries and Candida species among the immunocompromised in temperate countries. Trichomonascus ciferrii is a rare etiologic agent of fungal keratitis following trauma in a young, healthy woman living in a tropical country.

Methods: Case report and review of related literature

Results: A 20-year-old healthy woman developed keratitis nearly two weeks after an ocular trauma with an organic material, a cardboard paper, on her left eye. Ocular examination revealed a mid stromal corneal infiltrate with brush-like borders and hypopyon. The Giemsa stain of the corneal scraping demonstrated branching septated hyphae, and fungal culture grew T. ciferrii resistant to amphotericin B. She was successfully treated with topical natamycin 5% drops for 2 weeks, leading to complete eradication of the corneal infection with a residual stromal scar.

Conclusions: This case documented T. ciferrii, a rare fungal etiology in post-traumatic keratitis in a tropical country, successfully treated with natamycin 5%. Despite the virulence of T. ciferrii, the infection was promptly treated, resulting in a good functional vision.

Abstract No.: 200895
A Hole Lot of Trouble: A Case Report on Corneal Perforation from Stubborn Staphylococcal Blepharoconjunctivitis

First Author: George ***SOSUAN***
Co-Author(s): Kristine ***NATIVIDAD***

Purpose: Corneal perforation is a sight threatening ophthalmic emergency that carries a high risk of ocular morbidity and necessitates immediate intervention to re-establish the continuity of the globe.

Methods: This is a case report on a 21-year-old gentleman was referred due to 2-months history of right eye redness, discharge, foreign body sensation, and frequent eye rubbing that didn't resolve after self-medication. 1 month prior, sought outside consult and was started on Levofloxacin 1.5% and lubricants which didn't provide relief. 1 week prior, after swimming, noted more frequent eye rubbing and photosensitivity, he manifested with corneal perforation with iris prolapse - bandage contact lens (BCL) placed and oral antibiotics started. Past medical history reveal recurrent external hordeolum, conjunctivitis, and dry eye disease. Right eye examination, vision's 20/100 with matting and crusting at the base of the lashes, multiple chalazion and scarring, mucopurulent discharge, inspissated glands, erythema and edema of the eyelid margin, anterior lid telangiectasia with areas of madarosis, hyperemic conjunctiva, 360 pannus, grade 3 inferior corneal haze, 3.2x4.3mm descemetocoele, papillae on the palpebral conjunctiva. Corneal Patch Graft with Iris Prolapse Excision was done.

Results: Third post-operative week, vision was 20/70 with lash matting, loose sutures, and leakage on Seidel test. Medications were continued, loose sutures removed and BCL was placed.

Conclusions: Management of corneal perforation is influenced by the lesion's characteristics. When less invasive measures fail, corneal patch grafting serves as a reliable technique for preserving ocular integrity.

Abstract No.: 200813
CIN-FU-lly yours: A Rare Case of Corneal Intraepithelial Neoplasia

First Author: Carmina Franz ***QUITO***
Co-Author(s): Miguel Luis ***DELURIA***

Purpose: To present a case of CIN in an elderly Filipino patient, emphasizing the clinical presentation, diagnostic approach, and management strategy.

Methods: This is a case of a 72-year-old retired fertilizer businessman with a history of smoking and chronic exposure to ultraviolet (UV) radiation, who presented with a 4-year history of blurring of vision in the right eye. Clinical examination revealed a whitish to grayish translucent elevated epithelial sheet, extending from the nasal limbus at 2:30-5:00 position up to the central cornea, with fimbriated margins. Engorged blood vessels were also noted from the nasal bulbar conjunctiva extending to the lesion. Initial management involved 4 cycles (1 week on – 3 weeks off) of topical 1% 5-Flourouracil (5-FU). Surgical excision was carried out using the no-touch technique with 2-mm margin of normal tissue with adjuvant cryotherapy after some isolated islands of elevated lesions persisted despite topical chemotherapy

Results: Histopathology demonstrated dysplastic changes involving two-thirds of the lining epithelium. Individually, neoplastic cells contained hyperchromatic to vesicular nuclei. Focal acanthosis was seen, while loss of normal maturation sequence was noted in other areas, confirming the diagnosis.

Conclusions: CIN should be suspected in elderly patients with history of smoking and chronic UV exposure presenting with subtle sheets of elevated corneal epithelial growth. Early diagnosis and treatment with topical chemotherapeutic agents such as 5-FU, with or without surgical excision, can prevent progression to invasive squamous cell carcinoma.

Abstract No.: 201036
Comparative Evaluation of Tear Lactoferrin Levels and Visual Function Before and After Corneal Crosslinking in Patients with Corneal Ectasia

*First Author: Guzal **YUSUPOVA***
*Co-Author(s): Kamilla **BAZARBAYEVA**, Azamat **YUSUPOV***

Purpose: To compare the recovery of visual function and tear lactoferrin levels before and after corneal crosslinking (CXL) in patients with corneal ectasia.

Methods: A total of 11 patients were examined at the "Sihat Oila" Clinic. The main group (n=6) included patients with stage I–II keratoconus who underwent CXL. The control group (n=5) consisted of patients under observation without surgery. Comprehensive ophthalmic assessment included: visual acuity testing, biomicroscopy, tonometry, pachymetry, Pentacam-based corneal topography, and anterior segment OCT (Heidelberg Engineering). Tear lactoferrin levels were measured using ELISA (sample dilution 1:10 000).

Results: In the main group, lactoferrin levels increased from 0.02834±0.01845 to 0.13234±0.47728 mg/mL one month after CXL. Visual acuity improved from 0.4±0.2 to 0.5±0.3. In the control group, lactoferrin remained stable at 0.64643±0.23735 mg/mL and visual acuity at 0.6±0.2.

Conclusions: CXL leads to both biochemical and functional improvements. The increase in tear lactoferrin levels may serve as a potential biomarker of corneal repair and treatment efficacy.

Abstract No.: 200360
Dry Eye Disease (DED) After Pars Plana Vitrectomy and/or Scleral Buckling in a Philippine Tertiary Government Hospital

*First Author: Eleonore **IGUBAN***
*Co-Author(s): Patricia Abigail **LIM***

Purpose: Dry eye disease (DED) may occur after pars plana vitrectomy (PPV) and/or scleral buckling (SB). Various intraoperative and postoperative factors are suspected contributors, though studies remain limited. This study explored the incidence of DED among retinal surgery patients and aimed to correlate baseline characteristics, intraoperative, and postoperative factors with ocular surface dryness.

Methods: A single-center, prospective, non-randomized observational study was conducted. Patients underwent the Ocular Surface Disease Index (OSDI) questionnaire and baseline tear film tests before surgery, and again at one week, one month, and three months postoperatively. DED diagnosis required an OSDI >13 and one or more of the following: abnormal tear breakup time (TBUT), positive Schirmer test, or fluorescein breakup pattern. T-test, ANOVA, and Fisher tests were used for categorical data; Pearson's correlation assessed continuous variables.

Results: Twelve eyes (11 participants) were included (PPV N=8; PPV+SB N=4). No cases met criteria for DED (highest OSDI = 6.00). Symptoms were more common in females, diabetics, and seniors. TBUT and Schirmer results were normal but decreased postoperatively, especially in females, seniors, and those with extensive peritomy. PPV, extended scleral depression, and extensive peritomy significantly decreased reflex and basal tear secretion, though still within normal limits. Random tear film break was the most common postoperative staining pattern.

Conclusions: Retinal surgery was not significantly associated with DED. Age, gender, and diabetes influenced symptoms. While older age, peritomy, and scleral depression slightly reduced tear quality, effects were not statistically significant. Postoperative DED may have an evaporative etiology.

Abstract No.: 200754
Early Oral Steroids for Bee Sting Keratopathy with a Retained Stinger

*First Author: Bobbie Marie **SANTOS***
*Co-Author(s): Lovely Keziah **FLORES***

Purpose: Corneal bee sting injuries are rare but potentially sight-threatening due to mechanical

trauma, and toxic and immunologic reactions. This case highlights the critical role of early oral steroid therapy in preserving vision despite the presence of a retained stinger.

Methods: A 17-year-old female presented with painful blurred vision in the right eye one day after a bee sting. Examination revealed periorbital edema, conjunctival chemosis, visual acuity (VA) of hand motion with good light projection, and intraocular pressure (IOP) of 45 mmHg. Slit lamp examination showed a stinger in the peripheral corneal stroma with surrounding infiltrate, diffuse stromal edema with Descemet membrane folds, and hypopyon. Ocular ultrasound findings were unremarkable. Attempts to remove the stinger were unsuccessful. Initial therapy included topical steroids, antibiotics, cycloplegics, and anti-glaucoma eye drops. After one week of therapy, edema and stromal infiltrate persisted; thus, high-dose oral steroids (1 mg/kg/day) were initiated and gradually tapered.

Results: With oral steroid therapy, VA significantly improved, and the corneal edema and infiltrate markedly decreased. In one month, VA improved to 20/20 and IOP normalized to 17 mmHg, despite the retained stinger. Residual findings included a peripheral corneal scar, sectoral iris atrophy, minimal inferior microcystic edema, and a small anterior subcapsular cataract.

Conclusions: This case underscores the importance of early oral steroid therapy for severe bee sting keratopathy. When stinger removal is not feasible, prompt systemic steroid administration can prevent irreversible corneal decompensation, accelerate recovery, and potentially avoid the need for corneal transplantation.

Abstract No.: 201343
Extensive Primary Acquired Melanosis Successfully Managed with Map Biopsy, Cryotherapy, and Absolute Alcohol Wiping

*First Author: Ruben **LIM BON SIONG***
*Co-Author(s): Pierre Aldwin **ARCEO**, Gary John **MERCADO**, George Michael **SOSUAN**, Patricia Kaye **SY***

Purpose: Primary acquired melanosis (PAM) is a potentially pre-malignant lesion which can progress to melanoma. While PAM with atypia carries a significant risk of progression to melanoma, PAM without atypia is considered benign but still warrants close monitoring, especially when extensive. This report presents a case of an extensive primary acquired melanosis successfully managed with map biopsy, cryotherapy and absolute alcohol application.

Methods: Case report and review of related literature

Results: A 70-year-old male presented with a hyperpigmented, irregularly shaped, flat lesion on the temporal aspect of the left bulbar conjunctiva, initially noted five years ago. The lesion had remained stable until the past year, during which time it showed rapid enlargement. Ocular examination revealed diffuse, flat hyperpigmented patches involving nearly the entire bulbar conjunctiva, with extension to the peripheral cornea. The rest of the ocular examination was unremarkable. Map biopsy was performed to comprehensively rule out the presence of atypia, thereby helping to avoid unnecessary exenteration given the potential for malignant transformation into melanoma. Adjunctive cryotherapy and absolute alcohol application was also performed. Histopathological analysis of the biopsy specimens revealed low-grade conjunctival melanocytic intraepithelial lesions consistent with PAM without atypia. On follow-up, there was a marked reduction in pigmentation, although some residual lesions persisted

Conclusions: This case highlights the effectiveness of a conservative yet proactive management approach for extensive PAM without atypia. Early surgical intervention

may result favorable outcomes with minimal postoperative complications, especially in cases where size and extent of lesion raises concern despite benign histopathologic findings

Abstract No.: 200605
ICE See Iris Atrophy: A Case Report
*First Author: Gabrielle Angelica **LATOGA***

Purpose: The iridocorneal endothelial (ICE) syndrome is a rare, unilateral, sporadic disease characterized by abnormalities of the iris and the corneal endothelium usually involving a young to middle-aged woman with no family history.

Methods: A case report.

Results: We present two atypical cases of ICE syndrome: a 40-year-old male who came in due to intermittent blurring of vision of the right eye, and a 67-year-old female who came in due to chronic blurring of vision of the left eye. Both patients presented with dyscoria, extensive iris atrophy, guttata on slit lamp biomicroscopy, and a normal intraocular pressure (IOP) on the affected eye. On gonioscopic examination, both patients presented with high peripheral angle synechiae (PAS) on multiple angles. Additionally, the male patient already presented with grade 1 corneal edema. On the other hand, the female patient presented with ectropion uvea and iridocorneal touch with associated dense corneal opacities at the peripheries.

Conclusions: Patients with ICE syndrome are at risk for development of secondary angle closure glaucoma via migration of abnormal corneal endothelial cells and subsequent closure of the anterior chamber angle due to formation of high PAS. Due to the abnormal endothelial cells, the cornea is also at risk for development of corneal edema in the later stages. Hence, regular follow-ups are vital for symptomatic management and monitoring for IOP elevations and clinical corneal decompensation.

Abstract No.: 200297
Microkeratome Vs Femtosecond Laser Assisted SALK: A Randomized Controlled Trial
*First Author: Sanjay Kumar **MISHRA***
*Co-Author(s): Alok **SATI**, Mrinalini **SINGH***

Purpose: Comparison of Visual Acuity, Contrast Sensitivity, Corneal Aberrations, K-Readings, Corneal Thickness & Complications Between Microkeratome Assisted Sutureless Anterior Lamellar Keratoplasty (M-SALK) and Femtosecond Laser Assisted Sutureless Anterior Lamellar Keratoplasty (F-SALK) for Superficial Corneal Opacities

Methods: 72 Eyes (36 in Each Group) Underwent F-Salk or M-Salk in 2023 at a Tertiary Care Institute. The Donor and Recipient Lenticules Were Prepared Either by Using Microkeratome or Femtosecond Laser & Were Secured in Place with Glue & Bcl. Postoperative Visual Outcomes Were Compared Between Both Groups on Each Follow up Visit.

Results: No Intraoperative Complications Noted. Postoperative Assessment Over a Period of 6 Months Showed No Statistically Significant Differences in Visual Outcomes Between the Two Groups.

Conclusions: F-Salk May Be Considered Non-Inferior to M-Salk for the Treatment of Superficial Corneal Opacities.

Abstract No.: 200831
Ocular Tuberculosis Presenting as Nodular Scleritis in an Immunocompetent Host: A Case Report
*First Author: Rey Carlo **NARAVAL***
*Co-Author(s): Mary Ellaine **DIAZ**, Rishanne Meire **MABBORANG***

Purpose: Ocular tuberculosis (OTB) is a rare extrapulmonary presentation of Mycobacterium tuberculosis. Its clinical manifestation varies and can mimic various ocular and systemic conditions that can make its diagnosis and management challenging. The purpose of this study is to report a case of intraocular tuberculosis presenting as nodular scleritis in an immunocompetent individual with no

presenting symptoms other than its ocular findings.

Methods: This is a case report of a 45-year-old immunocompetent male presented with eye redness accompanied with pain and blurring of vision in the left eye with iris-angle granuloma, scleral thinning and anterior chamber inflammation on slit lamp examination.

Results: The work-up revealed a positive QuantiFERON-TB test, while other systemic signs and chest radiography were unremarkable. The patient was then managed as a case of presumptive ocular tuberculosis and was started on antitubercular therapy. Within days, the patient developed worsening inflammation and posterior synechiae formation, consistent with a paradoxical immune response. Topical steroids and introduction of systemic corticosteroids led to marked clinical improvement, with gradual resolution of inflammation and improvement of vision.

Conclusions: This case underscores the importance of considering OTB even with atypical presentations such as nodular scleritis and even in immunocompetent patients. Early recognition, appropriate diagnostic testing, and a timely treatment approach are essential to prevent long-term visual sequelae.

Abstract No.: 200744
Severe Ocular Burn Caused by Alkaline Eye Drops: A Case Report

*First Author: Raymond Nelson **REGALADO***
*Co-Author(s): Nexie **LIBRE***

Purpose: To present a case of sudden ocular pain and conjunctival injection following chemical exposure. Discuss the presentation and management of severe ocular chemical injury in tertiary level hospital setting in the Philippines.

Methods: We present a case of a 73-year old male who suffered with severe ocular injury, after he mistook concentrated alkaline water drops for his medication. Visual acuity of the right eye was 20/70, improved to 20/50. On examination, 360° chemosis, hyperemic conjunctiva, hazy cornea with no dye uptake. Irrigation with 2 liters of saline solution was done at the emergency room. Medications included the following eyedrops, Levoloxacin 0.5%, Prednisolone acetate, Atropine sulfate, Sodium hyaluronate. Accompanied with oral Prednisone and Ascorbic acid tablets.

Results: Improvement of vision to 20/50, and decrease of corneal epithelial defect were noted. After 3 weeks, vision worsened to 20/200 with increase in size of the corneal epithelial defect. Contraction of the upper palpebral conjunctiva from a granuloma formation was noted. Topical prednisolone was decreased. The patient was shifted to oral prednisone for 1 week, then tapered. A decrease of inflammation with improvement of the epithelial defect until completely healed was noted. Visual acuity improved up to 20/20 on completion of treatment.

Conclusions: Complete history and clinical findings confirm ocular chemical injury. Acute care involves prompt irrigation and thorough fornix exploration. Treatment aims to accelerate healing and suppress inflammation. Despite significant corneal defects, steroids remain essential—requiring judicious balance between topical and systemic dosing to promote recovery.

Abstract No.: 200662
Squamous Cell Carcinoma Arising from Pterygium.

*First Author: Alex **SUA***
*Co-Author(s): Neil Joseph **LEE**, Christian Ceasar **NERPIOL***

Purpose: Pterygium is a common ocular surface lesion. Though it exhibits a benign self-limiting course and treatment involves a simple outpatient excision of the mass, paraneoplastic features may be present which are often overlooked. This case report aims to highlight the importance of further pathologic investigation in the diagnosis and management of pterygium.

Methods: A retrospective case study with review of related literature.

Results: Surgical excision was performed and a specimen was sent for histopathology. Histopathological analysis confirmed pleomorphic cells with hyperchromatic nuclei invading into the deeper stroma, characteristic to malignant squamous cell differentiation.

Conclusions: Literature documenting the proper diagnosis of pterygium and its management, including a step-by-step surgical technique for excision, is robust. However, squamous cell neoplasia can present with similar gross features to pterygium, making it difficult to distinguish between the two. Overall, this case reveals that the underlying pathogenesis of pterygium may still warrant further research.

Abstract No.: 200858
Squamous Papilloma Presenting as Primary Pterygium: A Case Report

First Author: Steffani ***CHUA***
Co-Author(s): Jamille ***TURINGAN***

Purpose: To report a case of squamous papilloma in the right eye initially suspected as a pterygium.

Methods: This is a case report.

Results: A 46-year old male was referred to our clinic from another institution for excision of a presumed nasal pterygium on the right eye. Slit-lamp examination showed an cylindrical elevated smooth, non-movable fleshy conjunctival mass on the nasal aspect of the right eye, measuring 10 mm x 4 mm x 2 mm. The patient underwent excision biopsy of the conjunctival mass on the right eye under local anesthesia. Histopathologic findings confirmed the diagnosis of squamous papilloma.

Conclusions: This case underscores the importance of a careful clinical evaluation in distinguishing pterygium from other conjunctival lesions. Although conjunctival squamous papilloma is rare, a high index of suspicion is essential for accurate diagnosis and appropriate management.

Abstract No.: 201196
Successful Conservative Management of Methicillin-Resistant Staphylococcus aureus (MRSA) -Associated Periorbital Abscess Using Clindamycin: A Case Report and Review

First Author: I Gusti ***AYU MADE JULIARI***
Co-Author(s): Iska ***NOVI UDAYANI****, Nyoman* ***PRATITA WIDYASARI***

Purpose: Periorbital abscess caused by Methicillin-Resistant Staphylococcus aureus (MRSA) is a rare yet potentially progressive infection.[1] Early recognition and targeted antimicrobial therapy are crucial due to its rapid progression and high resistance profile.[2] While surgical drainage is often recommended, selected cases may respond favorably to medical management alone.

Methods: A 42-year-old male presented with swelling of the right upper eyelid, purulent discharge, blepharospasm, and difficulty opening the eye for one week. Clinical examination revealed upper eyelid edema, erythema, necrotic crusts, and conjunctival chemosis. Visual acuity remained 6/6 with normal intraocular pressure. Orbital Computed Tomography (CT) confirmed preseptal cellulitis with soft tissue involvement. Blood culture revealed MRSA. The patient was treated with oral clindamycin 300 mg three times daily, along with topical levofloxacin 0.5% and gentamicin eye ointment. Notable clinical improvement was observed within three days without surgical intervention.

Results: This case highlights the clinical utility of clindamycin in MRSA-related soft tissue infections. Although vancomycin is commonly used as first-line empirical therapy, clindamycin has shown efficacy in community-acquired MRSA cases due to its excellent tissue penetration and ability to inhibit toxin production. [3,4] Topical levofloxacin also demonstrates potent bactericidal activity against staphylococci organisms.[5] This case supports that, in selected patients, conservative

therapy with systemic and topical antibiotics can yield favorable outcomes without surgical intervention.

Conclusions: Periorbital abscess due to MRSA may be effectively managed conservatively with appropriate antibiotic selection guided by culture sensitivity and supported by imaging.

Abstract No.: 200818
Unexpected Visual Rehabilitation Following Tectonic Keratoplasty Using a Discarded Donor Cornea: A Case Report

*First Author: Janine Rovy Anne **FUTOLAN***
*Co-Author(s): Alyssa **DEFENSOR**, Mary Katherine **FRANCIA***

Purpose: To report a case of significant visual recovery following tectonic penetrating keratoplasty (TPK) using, non-optical grade donor cornea in a young male with corneal perforation secondary to microbial keratitis.

Methods: A 19-year-old male sustained a penetrating ocular injury to the right eye caused by a bamboo splinter while working on a farm. Initial self-treatment with breast milk delayed medical consultation. Upon presentation, the right eye exhibited hand motion vision, ciliary injection, neovascularization, microbial keratitis involving more than half of the cornea, corneal thinning, and iris prolapse. A TPK was performed using a non-optical grade corneal graft to restore globe integrity.

Results: Postoperative recovery was notable for graft clarity, absence of immune rejection, and unexpected improvement in visual acuity. By the 1-month follow-up, uncorrected visual acuity improved from hand motions to 20/160–20/32 (pinhole), with best-corrected visual acuity reaching 20/40.

Conclusions: Despite using a discarded donor cornea intended only for structural support, the patient experienced substantial visual rehabilitation. This outcome challenges traditional expectations of TPK and underscores the potential for visual recovery, even when using non-optical donor corneas—particularly in younger individuals. It also reinforces the importance of careful tissue handling and individualized postoperative care.

Abstract No.: 200473
What The Fluff: Fungal Keratitis In A 9-Year Old Treated With Intrastromal Voriconazole

*First Author: Pia Regina **GALVANTE***
*Co-Author(s): John Philip **LIM**, Nikolai Thadeus **MAPPATAO***

Purpose: To report a case of presumed fungal keratitis in a pediatric patient treated with intrastromal and intracameral Voriconazole.

Methods: AS-OCT revealed a hyperreflective mass with fuzzy borders adherent to the paracentral endothelium and hyperreflective dots in the anterior chamber (AC). The patient was initially treated with topical Natamycin, Atropine, and Levofloxacin for 18 days, but showed limited improvement and worsening corneal infiltrates, with vision deteriorating to 20/200. Due to the absence of epithelial defects and involvement of Descemet's membrane, a therapeutic cleanup of the fungal ball in the AC through irrigation and aspiration followed by intracameral and intrastromal injection of Voriconazole (50 µg/0.1ml) were performed under general anesthesia. Post-operatively, the patient continued with topical Levofloxacin and Voriconazole.

Results: The corneal infiltrate density gradually resolved, and the fungal ball did not recur. Visual acuity improved (20/250 pre-op, 20/100 day 1, 20/20 day 25). Though there was no apparent post-procedure endothelial cell loss, there was a note of scarified endothelial opacity in the area of the Descemet's break, and an anterior sub-capsular cataract at day 18 post-op.

Conclusions: This is the first documented local case of presumed fungal keratitis in a pediatric patient treated with intrastromal Voriconazole. The treatment, including the evacuation of the fungal ball and Voriconazole injections, was more effective than topical antifungals alone. Clinical trials are needed to further evaluate the safety and efficacy of intrastromal and intracameral Voriconazole injections in pediatric fungal keratitis.

Abstract No.: 201223
When Antifungals Aren't Enough: A Case of Fungal Endophthalmitis

First Author: Timothy ***TANG LEE SAY***
Co-Author(s): Cesar Emmanuel ***GLIPO****, George* ***SOSUAN***

Purpose: To highlight the diagnosis, management, progression and prognosis of post-operative fungal endophthalmitis

Methods: Discussion of diagnosis, management, progression, prognosis and outcomes of a case of post-operative fungal endophthalmitis through a Case Report/Study of a patient seen and managed in a private tertiary health institution.

Results: A case of a 63 year old male presenting with right eye pain with history of cataract (ECCE) surgery 7 months prior and post-operative endophthalmitis 8 months prior was seen with associated blurring of vision and prominent feathery mass in the AC. Initially symptoms resolved after intravitreal injection of antibiotics and was quiet in the interim. Upon consulting patient assessed with endophthalmitis and underwent Pars Plana Vitrectomy with injection of antibiotics with resolution of symptoms. Patient followed-up to the present with noted recalcitrant feathery mass in the anterior chamber and was treated with a regimen of intrastromal injection of antibiotics with marked improvement of visual and subjective outcomes. However, patient was lost to follow-up after completing the regimen for 2 months in the interim and then once again presented with recurrence of the feathery mass. Patient was again advised intrastromal antibiotic injection.

Conclusions: Fungal endophthalmitis is a relative rare but relevant disease entity especially in the local setting. Diagnosis is key in optimizing patient outcomes but this case shows that fungal infections can be obstinate despite maximal medication. This case shows that regular follow-up and patient awareness are also important factors to emphasize to avoid recurrence.

Abstract No.: 200584
"Beyond Glucose Control" Topical Insulin in Ocular Surface Regeneration after Chemical Injury: A Case Report

First Author: Raymond Nelson ***REGALADO***
Co-Author(s): Marianne Joyce ***CUSTODIO***

Purpose: To present a case of Ocular Chemical Injury in a 75-year-old Filipino female who presented with right eye pain, swelling, photophobia, and blurring of vision.

Methods: Remarkable findings on initial examination revealed a visual acuity of 20/70 the right eye with conjunctival injection and 8x7 mm corneal epithelial defect. Patient was treated for 2 weeks with topical lubricant and antibiotic drops, but the epithelial defect persisted. Topical insulin drops were initiated as adjunctive treatment to promote corneal re-epithelialization.

Results: The patient showed progressive healing of the corneal epithelial defect, marked reduction in ocular pain, and improvement in visual function during follow-up. The defect fully healed after 2 weeks.

Conclusions: This case report highlights the potential benefit of topical insulin therapy as an adjunct in the management of ocular chemical injuries, particularly in enhancing corneal surface healing and patient comfort.

Abstract No.: 200731
"Double Trouble": Interventional Case Report on Conjunctival and Intrastromal Corneal Cyst

First Author: Andrei ***MARTIN***
Co-Author(s): Danica ***TOMAS-ESTEBAN***

Purpose: We aim to report a case of conjunctival inclusion cyst with corneal extension. Corneal cyst is rare and recurrence after surgery is a challenge because of the difficulty of identifying the lesion in the stromal layer with the unavailability of intraoperative anterior segment imaging.

Methods: A 16-year-old, male, Filipino presented with a conjunctival mass on the right eye of two years duration. Patient allegedly

underwent cyst removal; however, recurrence was noted few months after. Enlargement of mass leading to cosmetic concern prompted consult at our institution. Anterior segment examination revealed a 9x11 mm, movable, fluid filled subconjunctival mass with 6x5 mm intrastromal corneal extension and a positive transillumination test. Anterior Segment Optical Coherence Tomography (AS-OCT) revealed an ovoid lesion dissecting almost the entire corneal stroma. Tryphan blue was utilized intraoperatively to delineate the corneal cyst. Excision biopsy, absolute alcohol wash and cytolysis with Balanced Salt Solution on the corneal cyst were done.

Results: Histologic examination result was consistent with epithelial inclusion cyst. Vision improved from 6/15 pre-operatively to 6/7.5 and no recurrence was noted at three months after surgery. There was marked flattening of the posterior cornea on the post-operative AS-OCT.

Conclusions: We report a case of conjunctival mass with intrastromal corneal extension after excision biopsy of a primary conjunctival inclusion cyst. This report highlights the role of Tryphan Blue, a readily available and cost-effective Azo dye, in delineating the extension of conjunctival cyst to the cornea in the absence of intra-operative AS-OCT.

Glaucoma

Abstract No.: 200950
A retrospective review of patients undergoing Paul Glaucoma Implant (PGI) in a Tertiary Government Hospital in the Philippines

*First Author: Joel **ADUAN***
*Co-Author(s): Beatriz Marie **TORRIJOS***

Purpose: This study is significant as it provides valuable insights into the clinical outcomes of patients undergoing Paul Glaucoma Implant (PGI) surgery in a tertiary government hospital in the Philippines. This research can help assess the effectiveness and long-term benefits of PGI implantation by evaluating pre- and post-operative visual acuity and intraocular pressure at various time points. Additionally, the study will determine the necessity of continued anti-glaucoma medications, which is essential for understanding patient compliance, financial burden, and overall treatment efficacy.

Methods: All patients seen, examined and diagnosed with Primary Open Angle Glaucoma or Primary Angle Closure Glaucoma at Quirino Memorial Medical Center Department of Ophthalmology from 2022-2024 were included in this study. Those with incomplete medical records, who were lost to follow-up, and who were previously diagnosed and treated in another institution were excluded.

Results: No significant change was seen from pre-op to 1 day, 1 week, or 1 month postop (p-values > 0.05). However, by 3 months and 6 months, the p-values were 0, indicating a highly significant reduction compared to pre-op values.

Conclusions: Clinically, there is a steady improvement in the measured outcome over time. Statistically, only the 3-month and 6-month follow-ups showed significant improvement from baseline. Earlier timepoints, although numerically improved, did not reach statistical significance, possibly due to higher variance.

Abstract No.: 200918
Association Between Acute Primary Angle Closure and Monthly Climate Variation in a Tertiary Government Hospital in Metro Manila, Philippines

*First Author: Joseph Manuel **CRUZ***
*Co-Author(s): Lisa Katrina **LIBERATO***

Purpose: This study aims to investigate the relationship between the incidence of acute primary angle closure (APAC) and monthly climate variations in the Philippines, while also exploring its potential correlations with the following climatic factors: temperature, humidity, air pressure, sunshine hours, solar radiation, wind speed, wind direction, and rain.

Methods: This is a retrospective, observational cohort study. The medical records of patients diagnosed with APAC from 2020 to 2024 in a tertiary government hospital were reviewed. Weather data were obtained from the Manila Observatory. Descriptive statistics was used to summarize demographic data, while Spearman rho analysis was employed to assess the association between the occurrence of APAC and monthly climate changes.

Results: A total of 104 subjects with a primary diagnosis of APAC were enrolled in the study. APAC admission was higher in females than in males. The mean age of all recruited subjects was 63.7 years old. Majority of the APAC subjects fell within the age range of 61–70 years old. During the study period, there was increased incidence of APAC in August and September. APAC incidence was found to have a moderate positive correlation with the number of sunshine hours ($p = 0.041$) and a strong negative correlation with the amount of rainfall ($p = 0.002$).

Conclusions: The study revealed peak APAC admissions during the months with high sunshine hours and low rainfall. The findings of this study will enhance our understanding of the epidemiology of APAC and contribute to the reduction of APAC incidence through public awareness and climate change monitoring.

Abstract No.: 201021
Comparative Analysis and Diagnostic Potential of Iris OCTA in Primary Open-Angle Glaucoma versus Normal-Tension Glaucoma

*First Author: Yaying **CHEN***
*Co-Author(s): Jiaying **LI**, Yuyan **ZHANG***

Purpose: Iris OCTA enables non-invasive visualization of anterior segment vasculature. While reduced iris thickness and vessel density are linked to glaucoma severity, the value of iris VD in differentiating POAG from NTG remains uncertain.

Methods: This cross-sectional study included POAG and NTG patients aged 18–80 years. All subjects underwent anterior segment OCTA imaging using a swept-source system (YG-100K PRO, TowardPi Medical Technology Co., Ltd., Beijing, China) with a 1060 nm central wavelength, axial resolution of 3.8 μm, and scan speed of 1000 kHz. Iris VD was measured in six regions using a modified ETDRS grid. ROC curves assessed diagnostic performance, and Pearson correlation examined associations between VD and clinical parameters (IOP, MD, AL).

Results: A total of 46 POAG and 56 NTG patients were included. Groups were comparable in age and sex, but POAG had higher IOP ($p < 0.001$). Iris VD showed no significant differences between groups across all six regions ($p > 0.4$). Individual regional AUCs ranged from 0.464 to 0.520, indicating poor diagnostic utility. Correlations between VD and clinical parameters were weak, with only central VD showing a marginal association with MD ($r = 0.13$, $p = 0.013$).

Conclusions: Iris vessel density shows minimal difference between POAG and NTG and limited diagnostic utility. Current OCTA metrics correlate weakly with disease severity. Larger studies with advanced analysis are needed to enhance their clinical relevance in glaucoma management.

Abstract No.: 200621
Leaky Bleb with Multiple Revisions and an Inferior Glaucoma Drainage Device Implantation: A Case Report

*First Author: Maria Catherina **NASOL***
*Co-Author(s): Cathleen Joyce **VILLAFUERTE**, Jon Denzel **YU***

Purpose: To report a case of a 40-year old female who had a leaking bleb and underwent bleb revisions and glaucoma drainage device (GDD) implantation at the inferonasal area and to discuss its effectiveness.

Methods: A retrospective case report was done followed by review of related literature and case correlation.

Results: A 40-year-old Filipino female with juvenile open-angle glaucoma presented with left eye pain 10 years after initial trabeculectomy. Examination revealed a cystic,

avascular bleb with a positive Seidel's test. She underwent three bleb revisions: (1) scleral patch with conjunctival advancement, (2) horizontal mattress suture with bandage contact lens, and (3) Tenon's flap with scleral patch. On day 16 after the third repair, intraocular pressure (IOP) increased to 36 mmHg. A Paul Glaucoma Implant was placed inferonasally. Her IOP stabilized in the mid-teens with Brimonidine + Timolol 2x a day and Dorzolamide 3x a day, and remained in the low-teens after ripcord removal, maintained on Brimonidine + Timolol.

Conclusions: The aim of management of a leaking bleb is to prevent future leaks and maintain a low IOP. After three revisions, the initial goal of leak prevention was achieved, however, there was subsequent elevation of IOP. An inferiorly-placed GDD implant was deemed necessary to achieve both leak prevention and IOP lowering. Inferior placement has been demonstrated to be safe and effective. In addition, it offers advantages in eyes with significant conjunctival scarring or anatomic abnormalities at the superior limbus.

Abstract No.: 201144
Preventing Early Hypotony in Secondary Open Angle Glaucoma: A Modified Ahmed Valve Implantation with Partial Tube Ligation in Sturge-Weber Syndrome

*First Author: George Michael **SOSUAN***
*Co-Author(s): Alyssa Louise **PEJANA-PAULINO***

Purpose: To describe the surgical management and postoperative outcome of a pediatric patient with Sturge-Weber Syndrome (SWS) and severe secondary open angle glaucoma who underwent Ahmed glaucoma valve (AGV) implantation with partial tube ligation to prevent early postoperative hypotony.

Methods: A 14 year-old female with known SWS presented with progressive visual decline and uncontrolled intraocular pressure (IOP) in the left eye despite maximal tolerated medical therapy. Ocular findings included worse visual acuity on the left eye (logMAR 0.63), dilated episcleral vessels, and advanced optic nerve cupping (cup-to-disc ratio of 0.9). A port-wine stain over the left V1 dermatome was noted, without systemic involvement. Baseline IOP on the left eye ranged from 20-30 mmHg despite maximal anti-glaucoma medication. Due to elevated episcleral venous pressure, decreased scleral rigidity in pediatric patients, and compromised outflow, an FP7 AGV was implanted with partial tube ligation using polyglactin suture (7-0 Vicryl). The ligation aimed to delay aqueous outflow until gradual lysis of the suture.

Results: Postoperative IOP on day 1 was 12 mmHg, decreasing to 10 mmHg by week 1, without signs of hypotony or choroidal effusion. By six weeks, the suture had dissolved spontaneously. IOP remained stable at 9-12 mmHg with use of a topical beta-blocker. No postoperative complications were observed during follow-up.

Conclusions: Partial tube ligation during AGV implantation may safely reduce early postoperative hypotony in pediatric patients with SWS-associated glaucoma. Tailored intraoperative modifications may improve surgical outcomes in secondary glaucoma with complex vascular and outflow anatomy.

Abstract No.: 200746
Xen Implantation in a Pregnant Filipino Patient with Anterior Segment Dysgenesis and Secondary Angle Closure Glaucoma

*First Author: Rommel **BAUTISTA***
*Co-Author(s): Dillon Edric **GO***

Purpose: Patient is a 25 year old female with anterior segment dysgenesis and congenital nystagmus on both eyes and had developed secondary angle closure glaucoma on the right eye. Patient underwent lens extraction with IOL implantation in childhood. Visual acuity was reported at 10/400 sans correction. Intraocular pressures on right eye were 35mmHg off meds and on gonioscopy, all angles were synechially closed except the superior angle which opened to scleral spur. Pressures were controlled at 15mmHg on Latanoprost, Brimonidine, and Brinzolamide. However, patient uncovered an unexpected pregnancy. Due to the possible

side effects of anti-glaucoma medications during pregnancy, we decided to implant a Xen implant rather than trabeculectomy given the history of anterior segment dysgenesis.

Methods: Corneal bridle suture was done to stabilize the eye. A combination of Mitomycin-C and lidocaine was injected in the proposed bleb site. Peritomy was done superiorly and sub-Tenon dissection was done peripherally. Judicious cautery was done on the scleral bed. Scleral tunnel 2mm from the limbus was done and Xen implant inserted into the tunnel with adequate anterior chamber exposure. Conjunctiva was then closed and implanted tested for patency. Patient was maintained on steroid and antibiotic drops post-operatively.

Results: Patient's IOP on 1 day post-operation was noted at 2mmHg, which is expected in post-Xen implantation. The IOP would gradually increase until it stabilized at 16mmHg off any medications at 2 months post-operation.

Conclusions: Minimally invasive glaucoma surgery is an effective alternative to glaucoma medications in pregnant patients with anterior segment dysgenesis.

Neuro ophthalmology

Abstract No.: 201338
A Case of Leber's Hereditary Optic Neuropathy in a Young Male Filipino

*First Author: Erika Jean **SALVAME-SIOPONGCO***
*Co-Author(s): Elyse **ANSELMO**, Manuel Benjamin Iv **IBAÑEZ**, Ma.Sheila **JIMENEZ**, Leonides Karlo Iii **MELENDRES**, Jocelyn **SY***

Purpose: This presentation aims to describe the clinical and diagnostic features of a patient suspected to have Leber's Hereditary Optic Neuropathy

Methods: Case presentation

Results: A 27-year-old male teacher presented with a 1 year history of sudden painless blurring of vision of the left eye followed by the right, described as a central scotoma. His review of systems and past medical history was only remarkable for treatment of pulmonary tuberculosis in 2017. He had a best-corrected visual acuity of 20/200 for the right eye and counting fingers at 2 feet for the left, with metamorphopsia and central scotoma respectively, on Amsler grid testing. Color vision was decreased. Fundus was unremarkable apart from bilateral temporal optic nerve pallor and dull foveal reflex of the left eye. Optical coherence tomography revealed significant retinal nerve fiber layer (RNFL) thinning and temporal neuroretinal rim thinning bilaterally. Multifocal electroretinogram showed reduction of the foveal peak. Low vision and genetic counseling were done, and the patient is for genetic testing for confirmatory diagnosis. The patient had slight improvement in vision on vitamin B complex.

Conclusions: Severe loss of vision with scarce fundus signs may be caused by either retinal or optic nerve pathologies. The sequential blurring of vision, dyschromatopsia, temporal optic nerve pallor and significant RNFL thinning are characteristic of LHON. Diagnosis of LHON is based on ophthalmologic findings, and genetic testing can confirm the diagnosis. Though management is mostly supportive, diagnosis would aid in effective counseling of the patient and his family.

Abstract No.: 200418
A Window to the Mass: A Rare Presentation of Bilateral Neuroretinitis Unmasking a Silent Intracranial Tumor in a 18-year-old female

*First Author: Janice **FERRER-BERNARDO***
*Co-Author(s): Richard **VILLAMOR***

Purpose: This is a case of an 18-year-old female presenting with painless bilateral sequential blurring of vision on the left eye then right eye at Ilocos Training and Regional Medical Center. The patient had symptoms of atypical optic neuritis presenting with bilateral neuroretinitis. No neurologic deficits elicited. No history of antecedent viral infection. Cat exposure was elicited.

Methods: Basic diagnostic work up was done to determine possible etiology.

Results: Optical Coherence Tomography (OCT) of optic nerve and macula OU showed a generalized thickening of the optic nerve and intraretinal layer with hyperreflective exudate deposits and presence of sub-Retinal Pigment Epithelium (RPE) edema. Serologic tests for Bartonella Henselae and Treponema pallidum were negative, and was also negative for Mycobacterium tuberculosis. Patient also tested negative for Anti-Nuclear Antibody (ANA). Cranial/ Orbital Magnetic Resonance Imaging with contrast and fat suppressed images showed a lobulated, avidly enhancing, predominantly solid, extra-axial mass measuring approximately 7.7 x 4.9 x 6.3 cm (CC x W x AP) seen centered in the atrium/trigone of the left lateral ventricle. Radiologic primary consideration is a choroid plexus papilloma versus a choroid plexus carcinoma, which is a rare brain tumor, accounted for <1% of brain tumor, that arises from the choroid plexus. Patient was co-managed with Neurosurgery and Pediatric Oncology.

Conclusions: To the best of the researchers' literature review, this is the first documented true intracranial mass (tumors within the cranial vault) causing bilateral neuroretinitis.

Abstract No.: 201219
Cat-scratch disease neuroretinitis in a young Filipina: A case report

*First Author: Vina **BALLADO***
*Co-Author(s): Kim Jasper **TORRELIZA***

Purpose: To present a case of an 18-year-old Filipina who complained of sudden, painless, blurring of vision of the left eye preceded by non-specific flu-like symptoms.

Methods: This is a case report.

Results: This is a case of an 18-year-old Filipina who presented with acute, painless blurring of vision of the left eye preceded by fever, myalgia, body malaise, and loss of appetite. Further history revealed that she sleeps with her pet cat. Visual acuity was 5/200 on the left eye with grade 2 relative afferent pupillary defect and dyschromatopsia. Fundoscopic examination of the left eye revealed optic disc swelling and stellate macular exudates. The diagnosis was confirmed by positive serology for Bartonella henselae. She was treated with oral Doxycycline and Rifampicin.

Conclusions: Neuroretinitis, an inflammation of the neural retina and optic nerve, can stem from infectious, immune-mediated process, or idiopathic causes. It is a rare ocular complication of Cat-scratch disease (CSD), a systemic infection caused by Bartonella henselae, which can be transmitted through cat scratch or bite. Early recognition of the disease can be achieved through accurate history taking, including feline exposure, and serology testing. Treatment options include antibiotic therapy with Doxycycline and Rifampicin. Some literature suggest supplementation with corticosteroids. However, there is still no consensus on the treatment of CSD and its ocular complications. There is a limited data on CSD neuroretinitis in Asia and to our knowledge, there are no reported case yet in the Philippines

Abstract No.: 200661
De Morsier Plus Syndrome: A Rare Case of Septo-Optic Dysplasia with Schizencephaly in a Filipino Child: A Case Report

*First Author: Clarisse **TADY***
*Co-Author(s): Kevin Michael **DE CASTRO***

Purpose: To report a case of unilateral open-lip schizencephaly with absent septum pellucidum and mega cisterna magna in a Filipino child presenting primarily with ophthalmologic signs of pendular nystagmus, left temporal visual field defect, and refractive amblyopia highlighting the key role of ophthalmologists in identifying neurologic causes of childhood visual impairment.

Methods: An 11-year-old female presented with progressive visual blurring and abnormal eye movements. Ophthalmologic assessment included visual acuity testing, refraction, confrontation visual fields, and motility exam. Neurologic and developmental evaluations utilized the Vineland Adaptive Behavior Scales–3 and Wide Range Achievement Test–5.

Neuroimaging (contrast-enhanced cranial CT) and EEG were performed.

Results: Ocular exam showed pendular nystagmus, decreased visual acuity (20/70 OU), left temporal visual field defect, left sided body weakness, and bilateral optic atrophy. Developmental assessment revealed mild to moderate intellectual and learning delays. EEG showed frequent epileptiform discharges in the right frontal lobe. Imaging confirmed right-sided open-lip schizencephaly, absent septum pellucidum, grey matter heterotopia, and mega cisterna magna.

Conclusions: This case emphasizes the need to consider underlying neurologic pathology in children with unexplained nystagmus and visual field defects. Schizencephaly typically presents with seizures and more overt motor deficits, this patient's presentation was predominantly visual with mild left-sided weakness. To our knowledge, such a presentation is rarely reported in the Philippines. Early neuroimaging and multidisciplinary care are essential for comprehensive diagnosis and management.

Abstract No.: 201331
The Eyes Don't Lie: A Case of Linezolid Toxic Optic Neuropathy in the Philippines

First Author: Marie Lou ***GUILLERMO***

Purpose: The most familiar medication to treat pulmonary tuberculosis for Ophthalmologists is Ethambutol. However, with rising cases of multidrug resistant infections, internal medicine specialists have been obliged on prescribing alternative antibiotics such as Linezolid. This drug presents many adverse effects and this case presentation aims to highlight the Ophthalmological aspect of Linezolid's effects.

Methods: A 40 year old Filipino male who is a known case of Multi-Drug Resistant Tuberculosis and treated with Bedaquidine, Pretomanid, Linezolid, and Moxifloxacin experienced sudden onset blurring of vision of the right eye. It was described as central, dim, and non-progressive. He sought consultation at a local health center and was noted to have decreased color vision of both eyes and was subsequently referred to Ophthalmology.

Results: The BCVA of the right eye was 6/30 and 6/6 on the left on first consult. The patient showed strong color vision defect on Farnsworth D15. He had unremarkable OCT of the RNFL of the Optic Nerve Head, Macular Ganglion Cell Layer, and Fundus Photo. He had a cecocentral visual field defect of the right eye. Linezolid was discontinued from his regimen by his primary care physician. The patient on follow up showed improvement of BCVA and color vision.

Conclusions: Optic Neuropathy is one of the few indications to discontinue Linezolid in a MDR-TB case. Multiple case reports in other countries show that visual acuity and color vision recovers spontaneously once Linezolid has been discontinued

Abstract No.: 201325
Tolosa-Hunt Syndrome: A Rare Cause of Painful Ophthalmoplegia – A Case Report

First Author: Blenda Cate ***JADOC***

Purpose: To present a rare case of Tolosa-Hunt Syndrome (THS) in a 25-year-old male who came in due to blurring of vision and painful ophthalmoplegia of the right eye. Emphasizing diagnostic challenges and response to high-dose corticosteroid therapy.

Methods: A 25-year-old male presented with acute onset of severe unilateral periorbital pain followed by sudden ophthalmoplegia. Neurological examination, ophthalmologic evaluations, as well as contrast-enhanced magnetic resonance imaging (MRI) of the brain and orbit, and laboratory investigations were done to rule out different etiologies, namely: infectious, neoplastic, and inflammatory. The patient was managed with high-dose corticosteroids and monitored clinically.

Results: MRI revealed pachymeningeal thickening and enhancement in both frontal and left parietal regions which may relate to an inflammatory process. Infectious workups yields unremarkable results. The diagnosis of Tolosa-

Hunt Syndrome was made based on clinical and radiologic findings. The patient showed marked improvement in pain and partial recovery of ocular motility within 24 to 48 hours of high-dose corticosteroid initiation, with complete resolution over four weeks.

Conclusions: In the differential diagnosis of painful ophthalmoplegia, Tolosa-Hunt Syndrome, an uncommon idiopathic granulomatous inflammation of the cavernous sinus, should be taken into account. Corticosteroid treatment and early detection can reduce symptoms quickly and avoid complications. In order to diagnose and rule out other causes, MRI and laboratory work ups are essential.

Abstract No.: 200499
"Double Trouble": A Rare Case of 33 Years old Male, Diagnosed with Miller Fisher Syndrome

First Author: Buenjim ***MARIANO***
Co-Author(s): Mona Leigh ***GERONIMO***

Purpose: To discuss and present an interesting case of Miller Fisher Syndrome in a 33 year old ,Filipino male.

Methods: Interesting Case Presentation

Results: We would like draw your attention to a rare case of MFS in a 33-year-old Filipino male with ophthalmoplegia, areflexia, ataxia, and a history of upper respiratory tract infection. Laboratory tests and diagnostic evaluations were performed; including a CBC, urinalysis, and cranial MRI/MRA. No medications were administered. The patient's condition improved following daily monitoring and extensive follow-up. Because this condition has a great prognosis, early detection and appropriate treatment are critical to minimizing unnecessary medical intervention and psychological anguish. Some of the differential diagnoses of MFS include stroke, GBS, Myasthenia Gravis and Bickerstaff's brainstem encephalitis. MFS is diagnosed based on the clinical signs and may be validated by laboratory tests. Several "formes frustes" and overlap syndromes have been reported to far, improving our understanding of this clinical spectrum. Plasmapheresis with IVIg are the two most commonly proposed immunotherapy therapies for GBS. MFS is a self-resolving disease with a favorable prognosis. Still, not much is known about it or has been researched. The triad of ataxia, ophthalmoplegia, and areflexia—which is indicative of MFS—is present in this case study.

Conclusions: Although rare, the illness should not go undetected. By identifying essential clinical criteria, practitioners can determine the origin of their patients' illnesses and establish confidence in a successful recovery. The existence of additional neurological symptoms may complicate the medical assessment.

Orbital and Oculoplastic Surgery

Abstract No.: 200721
A Bite that Binds: Case of Traumatic Apposition and Adhesion of the Upper and Lower Eyelid After a Dog Bite.

First Author: Nonette Yulo ***PASCO-ROSETE***
Co-Author(s): Gio Dominique ***SAN PEDRO,***
Camille Victoria ***SISON***

Purpose: To highlight the importance of proper and timely repair of full thickness margin involvement laceration in a case of traumatic apposition.

Methods: Case report of a male patient

Results: A 6 Year old male came in due to apposition of the right lateral third of the upper and lower eyelids. Two years prior, the patient was attacked by a stray dog resulting in multiple facial lacerations including the right upper and lower eyelids. Surgical repair was done in other areas of the face except on the right eyelids. The patient was lost to follow up at this time, no surgical repair of the eyelids was done which resulted in apposition of the upper and lower eyelids with progressive thickening of the apposed tissues hence consult. On Initial examination, vision for both eyes was 20/20, with unremarkable corneal examination. There was noted apposition of the lateral third of the

right upper and lower eyelids with involvement of the anterior and posterior lamellae with eyelashes of lower lid sloping upwards. Surgical repair was thus advised to patient. Surgery was done under general anesthesia with local infiltration for hemostasis. Fibrotic adhesions were excised while ensuring hemostasis. Careful assessment was done to determine proper anatomic placement. Both lids were dissected and wounds were refreshed. Proper tarsal and lid margin apposition was done to ensure function and cosmesis restoration.

Conclusions: This case highlights the importance of proper and timely repair of full thickness, margin-involving eyelid lacerations in order to achieve cosmesis and maintain eyelid function.

Abstract No.: 201050
A Bundle of Joy and A Bundle in the Eye: Orbital Schwannoma in a Pregnant Filipino

*First Author: Pamela Bianca **CHAN***
*Co-Author(s): Lisa Katrina **LIBERATO**, Mariel Angelou **PARULAN***

Purpose: Schwannomas are benign, slow-growing tumors of the peripheral nerve sheath that arise from Schwann cells. Orbital schwannomas are uncommon, representing just 1% of all tumors found in the orbit. We report a case of an orbital schwannoma, which presented with the unusual clinical feature of rapid enlargement during pregnancy in a 38 year-old Filipino.

Methods: A comprehensive ophthalmic exam was performed. Complete laboratory workup was done, as well as a contrast-enhanced cranial magnetic resonance imaging with orbital cuts. Histologic and immunohistochemical tests on the obtained specimen confirmed the diagnosis.

Results: Patient came in a with a 2-year history of right upper lid mass, which was noted to quickly progress in size at the time of her pregnancy. Patient had unremarkable past medical, ocular, and maternal history. Imaging revealed an orbital mass with histopathologic and immunohistochemical findings consistent with a schwannoma. Patient underwent excision of the right orbital mass and showed complete recovery with normal lid vitals, no globe dystopia, and a visual acuity of 20/20 at 2 months post-op.

Conclusions: Primary orbital schwannomas are uncommon but should be included in the differential diagnosis of orbital tumors in a pregnant patient who presents with a progressively enlarging, well-circumscribed, and contrast-enhanced mass. The combination of radiographic imaging, histologic findings, and immunohistochemical staining will provide an accurate diagnosis. Complete surgical excision with careful postoperative follow-up is the mainstay of treatment. Overall, the prognosis for patients who receive a timely diagnosis and appropriate treatment is favorable.

Abstract No.: 200416
A Rare Case of Periorbital Necrotizing Fasciitis Mimicking Benign Cellulitis in a Diabetic Patient

*First Author: Sandra **WORAK-TAN***
*Co-Author(s): Reuben Mari **MERCADO***

Purpose: To report a rare case of a rapidly progressive periorbital necrotizing fasciitis (NF) in a previously undiagnosed diabetic patient.

Methods: A 58-year-old male with no known prior comorbidities presented with left lower eyelid erythema and swelling secondary to a furuncular lesion in the orofacial area with history of self-manipulation. Initial management involved empiric intravenous antibiotics for presumed cellulitis. Despite stable visual acuity and extraocular movements, progressive swelling and anesthesia over the lower lid prompted reevaluation with wound cultures revealing Klebsiella spp. Surgical wound exploration confirmed periorbital necrotizing fasciitis. Multidisciplinary care including Infectious, Endocrinology, Dermatology, and Otorhinolaryngology services was instituted.

Results: Surgical debridement was immediately performed and intraoperatively, breakdown of subcutaneous and muscular layers were noted. Over several days, there was still

persistent slough formation on the wound bed despite bedside debridement that precluded healing. The patient had to undergo serial debridements and was eventually referred for advanced wound care that included the use of hydrofiber dressings with silver, cadexomer iodine powder, and ultrasound-assisted debridement. The patient's globe was spared, and the left lower lid wound bed recovered by secondary intention.

Conclusions: Periorbital necrotizing fasciitis is a rare but life- and vision-threatening condition that may initially mimic benign periorbital infections. This case emphasizes the importance of early recognition, appropriate antibiotics, timely surgical debridement, and advanced wound care strategies. High vigilance for progression despite standard treatment and involvement of a multidisciplinary team are critical to preserving both life and vision.

Abstract No.: 200574
An Atypical and Unique Presentation of Orbital Lymphoma Masquerading as a Vascular Anomaly

First Author: Michael ***SIBULO***
Co-Author(s): Richard Dean Clod ***DELA CRUZ****, Yvette* ***SANTIAGO-GATMAITAN***

Purpose: To describe an atypical presentation of a patient diagnosed with peribulbar orbital lymphoma.

Methods: This is a case report of a 33-year-old male with orbital lymphoma, presenting with waxing and waning yellow subconjunctival fluid of the right lateral bulbar conjunctiva, associated with lid swelling and proptosis.

Results: A 33-year-old male presented with a 1-year history of lid swelling, and waxing and waning yellow subconjunctival fluid on the lateral bulbar conjunctiva. The lid swelling started on the right upper lid and persisted throughout the day. The yellow chemosis was more prominent in the morning and faded throughout the day. His ophthalmic history was otherwise unremarkable. There is noted proptosis, and an orbital magnetic resonance imaging (MRI) with contrast revealed a 4.1cm x 1.7cm x 2.2cm right intraconal mass abutting the medial rectus muscle and encapsulating the optic nerve. Initially considered as an orbital venous anomaly, an anterior orbitotomy with mass debulking was performed, revealing recurrence of the yellow fluid and pupillary dilation during manipulation. Dissection of the peribulbar mass was challenging due to its vascular nature. Histopathology and immunohistochemistry identified a Mature B-Cell Lymphoproliferative Disorder, favoring Extranodal Marginal Zone Lymphoma of Mucosa Associated Lymphoid Tissue (MALToma). Two months after postoperative radiotherapy, there was no recurrence of the yellow fluid.

Conclusions: This is a unique presentation of MALToma. The mass's vascular nature in imaging and the presence of a yellow subconjunctival fluid are atypical for retrobulbar orbital lymphoma. These should be considered as possible findings in future cases.

Abstract No.: 200618
Beneath the Surface: A Case Report of Periorbital Necrotizing Fasciitis and Its Systemic Impact

First Author: Elaine Marie ***YATCO-OMAÑA***
Co-Author(s): Emanuele Maria Alfonso ***ECHEVARRIA***

Purpose: To present a case report of a diabetic Filipino female who was diagnosed with necrotizing fasciitis (NF). It is a rare life-threatening disease that is characterized by rapidly progressing necrotizing infection of the subcutaneous and superficial fascia with secondary necrosis of the overlying skin.

Methods: The patient presented with a 10-day rapidly enlarging painful swelling over the right brow and upper lid that evolved into a fluctuant mass with a central necrotic patch.

Results: Laboratory studies revealed elevated HbA1C, leukocyte count and C-reactive protein. Culture studies revealed both Pseudomonas aeruginosa and Klebsiella pneumoniae. Incision and drainage with debridement was performed under local anesthesia to decreased bacterial load, drain the abscess, and examine the eye

intraoperatively. The vision of the right eye was intact and the remaining skin defect was patched using Split Thickness Skin Graft with the help of the Plastic Surgery service.

Conclusions: NF is a rare life threatening disease that must be acted on quickly to prevent mortality and morbidity. This differential must be included in the list of ocular emergencies ophthalmologists must keep top-of-mind. A rapidly growing and painful swollen tissue that spreads outward and that evolves from a violaceous to black tissue with systemic symptoms points to NF. Delays in treatment and recognition can be fatal to the patient. Both systemic antibiotics and surgical debridement must be done to avoid mortality and extensive morbidity. Finally, multi-disciplinary care is crucial in achieving the most optimum outcome for these cases.

Abstract No.: 201358
Chloroma vs. Eosinophilic Granuloma: A Diagnostic Challenge in Pediatric Bone Lesions

*First Author: Gary John **MERCADO***
*Co-Author(s): Christian Patrick **ANTONIO**, Camille Victoria **SISON***

Purpose: Chloromas, also known as granulocytic or myeloid sarcomas, are rare extramedullary tumors of immature myeloid cells that can mimic other lesions such as eosinophilic granuloma. Their subtle clinical and radiologic features make diagnosis challenging, emphasizing the need for high clinical suspicion and immunophenotyping.

Methods: A case report of a 3 year old male patient

Results: A 3-year-old male presented with a progressively enlarging left orbital mass two months after minor head trauma. The mass displaced the globe inferiorly. CT imaging showed a heterogeneously enhancing extraconal mass with osteolysis of the superior orbital rim and periorbital extension, initially suggesting a granulomatous histiocytic lesion. MRI a month later revealed new lesions in the bilateral frontal bones with dural and scalp involvement. Skeletal survey identified multiple lytic lesions in long bones and feet, further supporting a provisional diagnosis of eosinophilic granuloma. An anterior orbitotomy and biopsy of the orbital mass however, revealed a white, rubbery lesion inconsistent with Langerhans cell histiocytosis. Additional workup, including histopathology, bone marrow aspiration with flow cytometry, and 24-hour urine 24-hour urine vanillylmandelic acid was performed to reach a definitive diagnosis. Prophylactic vincristine was started while awaiting biopsy results to manage symptoms.

Conclusions: Granulomatous bone lesions in children pose significant diagnostic challenges due to overlapping presentations. Accurate diagnosis of these lesions require integration of imaging, histopathology, immunohistochemistry, and systemic evaluation. Prompt and accurate differentiation, particularly between eosinophilic granuloma and chloroma, is critical for initiating appropriate and timely treatment.

Abstract No.: 200734
DIAGNOSTIC DILEMMA IN EXTRAPULMONARY TUBERCULOSIS PRESENTING AS ORBITAL CELLULITIS AND MULTIFOCAL INFECTION IN A PEDIATRIC PATIENT - A CASE REPORT

*First Author: Marco **TUMALAD***
*Co-Author(s): Sharmaine Kae **PO***

Purpose: To present a diagnostic dilemma in a pediatric case of orbital cellulitis with subperiosteal abscess, central microbial keratitis, and concurrent multiple soft tissue and bony lesions, eventually diagnosed to be extrapulmonary tuberculosis.

Methods: This case report describes a 2-year-old Filipino presenting with erythematous, tender right upper eyelid swelling, with multifocal soft tissue and bony lesions. Workup – blood tests, imaging, cultures, and GeneXpert – followed by empiric therapy, were done.

Results: Prior exposure and febrile episodes led the team to initially suspect tuberculosis; chest xray was suggestive of pneumonia,

but three negative GeneXperts suggested otherwise. Drainage of right upper eyelid abscess was MRSA-positive with GSCS, hence diagnosed as multifocal MRSA furunculosis with chronic osteomyelitis. Patient improved with empiric therapy of intravenous Ceftriaxone and Vancomycin and was discharged with oral Co-Amoxiclav and Clindamycin. Right central microbial keratitis was managed with Levofloxacin and Atropine eyedrops, and wounds with Zinc Oxide. Recurrence of right heel swelling warranted readmission – imaging showed lytic calcaneal lesion, and GeneXpert confirmed Mycobacterium tuberculosis, prompting initiation of extrapulmonary tuberculosis treatment, resulting in decreased right heel swelling and erythema.

Conclusions: This case highlights the challenge when diagnosing and managing pediatric soft tissue infections, particularly extrapulmonary tuberculosis, where clinical presentation may mimic bacterial and neoplastic etiologies. Further compounded in this case, a troubled family setup, initially negative GeneXpert, inconclusive histopathology results, and positive response to antibacterial therapy. It shows the dynamic nature of the disease, necessitating a better understanding of pathophysiology, careful interpretation of laboratory results, and close monitoring of pediatric patients.

Abstract No.: 200767
It's ComplicaTED: A case report of a 12 year-old female with Thyroid Eye Disease

*First Author: Ma.Regina Paula **VALENCIA***
*Co-Author(s): Kimberly Amanda **COMIA**, Elaine Marie **OMAÑA**, Camille Victoria **SISON***

Purpose: Thyroid Eye Disease most commonly occurs in females, and often occurs in the age groups of 40-44 years and 60-64 years old. The purpose of this study is to present a case of a 12 year-old female with Thyroid Eye Disease.

Methods: This is a case of a 12 year-old female, Filipino, who presented with a one year history of "bulging eyes" with blurring of vision, both eyes. On initial consultation, visual acuity was 6/12, improving to 6/6 with correction. Color vision and intraocular pressures were normal. Clinical Activity Score (CAS) was 2/7 (1 - gaze-evoked orbital pain, 1 - eyelid swelling).

Results: Thyroid function tests showed hyperthyroidism, and thyroid receptor antibodies were elevated. Orbital CT scan with contrast showed no evidence of proptosis and no enlargement of the extraocular muscles. The patient was subsequently referred to Pediatric Ophthalmology, ENT, and Pediatric Endocrinology services for co-management. Ocular lubricants, selenium supplementation, methimazole, and propanolol were prescribed. Supportive measures, such as avoidance of smoke exposure were also advised. In the course of monitoring, she had increased proptosis, and decrease in visual acuity, apart from the gaze-evoked orbital pain, and eyelid swelling, resulting in a CAS score of 4/10. This prompted close monitoring, and pediatric clearance for intravenous methylprednisone.

Conclusions: This case presents an uncommon case of Thyroid Eye Disease in the pediatric population, and highlights the need for multidisciplinary care between ophthalmologists and other specialties in order to maintain stability in eye and hormone health.

Abstract No.: 201251
LOWER LID BASAL CELL CARCINOMA WITH CONCOMITANT INVASIVE DUCTAL CARCINOMA OF THE BREAST IN A 51-YEAR-OLD MALE

*First Author: Charisse Ann **TANLAPCO***
*Co-Author(s): Ahnna Patrizia **AGUSTIN***

Purpose: 1. To present a case of Lower Lid Basal Cell Carcinoma with concomitant Invasive Ductal Carcinoma of the Breast in a 51-year-old male. 2. To present the epidemiology of Lower Lid Basal Carcinoma with concomitant Invasive Ductal Carcinoma of the Breast.

Methods: Case Report

Results: Connection still remains unclear since literatures similar to the case is still limited but it can be possibly hypothesized that DNA mutation caused by UV radiation exposure plays a big role.

Conclusions: This is the first noted case of Basal Carcinoma of the Eyelid with concomitant Invasive Ductal Carcinoma of the breast. Basal Cell Carcinoma is generally known as the most common neoplasm of the eyelids and is highly related to sun exposure which is its main risk factor whereas Invasive ductal carcinoma arises from epithelial elements and accounts for seventy to eighty percent of invasive breast cancer lesions.

Abstract No.: 201111
Left Internal Carotid Artery – Inferior Petrosal Sinus Fistula in a Filipino Male: A Case Report

*First Author: Marco **TUMALAD***
*Co-Author(s): Nadine Leigh **CHU***

Purpose: To present a rare case of delayed-onset dural arteriovenous fistula following head trauma, emphasizing diagnostic challenges and the role of multimodal imaging in evaluation and diagnosis.

Methods: This case report details the patient's history, clinical findings, and multimodal imaging, including optical coherence tomography of the optic nerve head, magnetic resonance imaging with magnetic resonance angiography, and six-vessel cerebral angiogram.

Results: A 53-year-old male presented with a 4-year history of progressive, non-pulsatile left eye proptosis, painless visual blurring, redness, and heaviness, with onset 30 years after prior head trauma. Ocular examination revealed axial proptosis, dilated tortuous episcleral vessels, significant vision loss, and an elevated intraocular pressure relative to the fellow eye. Fundoscopy showed bilateral optic nerve cupping with notable retinal nerve fiber layer thinning on the left. MRI/MRA demonstrated suspicious dilatation of the left superior ophthalmic vein. A six-vessel digital subtraction angiogram confirmed a dural arteriovenous fistula between the left internal carotid artery and the inferior petrosal sinus, with predominantly anterograde drainage into the internal jugular vein.

Conclusions: Dural arteriovenous fistulas are rare, with only 6% involving the inferior petrosal sinus. Those with predominantly anterograde venous drainage often follow an indolent course, lacking the overt clinical signs typically associated with high-flow arteriovenous fistulas. This subtle presentation may obscure the underlying pathology, delaying diagnosis and increasing the risk of irreversible visual loss. Early recognition through a high index of suspicion and appropriate use of multimodal imaging is essential for timely intervention and preservation of vision.

Abstract No.: 200724
Nose-y Neighbors: A Case of Ethmoid Sinus Tumor with Orbital and Frontal Sinus Extension

*First Author: Elaine Marie **OMAÑA***
*Co-Author(s): Camille Victoria **SISON***

Purpose: Paranasal sinus tumors are rare and aggressive tumors. They can grow silently for a long time due to the large air spaces; thus, majority are diagnosed at an advanced stage. The purpose of this study is to present a case of ethmoid sinus adenocarcinoma with orbital and frontal sinus extension.

Methods: This is a case of a 53 year-old male, Filipino, smoker with a 5 month history of right upper eyelid drooping with blurring of vision, and periorbital pain. Vision was hand movement with good light projection. Pupils were briskly reactive to light, and relative afferent pupillary defect was present. There was a firm, non-tender mass above the medial canthal tendon extending to the inferior orbital rim, and inferolateral globe displacement. Limitations in extraocular muscle movement, ptosis, proptosis, and complete nasolacrimal duct obstruction were noted.

Results: CT scan revealed an irregularly-shaped, heterogeneous hyperdense mass in the right ethmoid sinus area with extension to the orbit and frontal sinus. Incision biopsy showed adenocarcinoma. Metastatic work-up was unremarkable. Patient subsequently underwent non-lid sparing orbital exenteration combined

with ENT and Neurosurgery procedures. Final histopathology results showed adenocarcinoma with perineural and lymphovascular invasion. Immunohistochemistry stains yielded positive CK7 and negative CK20 and p63 staining. Patient was referred to Radiation Oncology for post-operative radiotherapy.

Conclusions: This case highlights the need for a good clinical eye in cases of malignancy, and determination if the tumor is primary, secondary, or metastases. In these cases, imaging and histopathology must be maximized, and multidisciplinary care is essential in treatment.

Abstract No.: 200291
Occult Indirect injury of the optic nerve

*First Author: Xuchuan **WANG***

Purpose: There is no obvious decline in visual acuity in the early stage of occult indirect optic nerve injury, and early clinical diagnosis is relatively difficult. This requires a detailed inquiry of the medical history during the diagnosis process, analysis of the force - bearing situation, and careful examination of CT scans.

Methods: The patient was emergently admitted to the hospital 5 hours after being whipped by a steel bar on the left eyebrow arch and inner canthus. After admission, relevant examinations were completed: Orbital CT showed that the left eyeball protruded forward, the left eyelid was significantly thickened, and patchy high-density shadows were seen in the orbital fat body behind the left eyeball, with unclear boundaries from the left optic nerve and medial rectus muscle.

Results: The left optic nerve, medial rectus muscle, and inferior rectus muscle were slightly thicker than those on the contralateral side. There were fractures of the left lateral orbital wall and the greater wing of the sphenoid bone. No obvious abnormalities were found in the size, shape, and density of the bilateral eyeballs. There was swelling of the soft tissues around the left orbit.

Conclusions: Timely examination of visual evoked potentials and visual fields, and attention to short - term re - examination. Pay attention to checking for relative afferent pupillary defect. Timely diagnosis and treatment are beneficial for preventing the occurrence of severe optic nerve atrophy and avoiding medical disputes.

Abstract No.: 200773
Orbital Varix: A Rare Case of Sudden Onset Unilateral Proptosis In A 3 Year Old Child

*First Author: Romeo Jr. **CRUZ***
*Co-Author(s): Nexie **LIBRE***

Purpose: To present a rare case of orbital varix mimicking orbital cellulitis in a 3-year-old male, highlighting the diagnostic challenge and importance of considering venous malformations in acute proptosis.

Methods: This is a case of a 3-year-old boy, with sudden, nonaxial protrusion of the left eye without additional ocular or systemic symptoms. Visual acuity was 20/20. Laboratory tests showed an elevated white blood cell count with predominantly neutrophils, and contrastenhanced computed tomography (CT) of the head revealed findings interpreted as periorbital and orbital cellulitis. Intravenous antibiotics were initiated. However, proptosis did not resolve, warranting an orbitotomy by lid crease approach, for possible abscess drainage. Intraoperatively, there was a violaceous, cystic structure with serosanguinous fluid. Biopsy revealed elongated connective tissue with dilated, congested blood vessels, confirming a diagnosis of orbital venous malformation rather than infection.

Results: Post-operatively, proptosis resolved significantly. Intravenous antibiotics were completed, and the child was closely observed. He was discharged with instructions for regular checkups due to the potential for recurrence.

Conclusions: Orbital varix is a rare cause of unilateral proptosis, however, it cannot be overemphasized that it should be considered as a differential diagnosis. We can conclude from this case that some rare conditions exhibit

a very common presentation, nevertheless keeping an unbiased mind will aid us in our management. Prompt and appropriate diagnostic tests can aid us in narrowing down our primary diagnosis, resulting to a guided correct treatment.

Abstract No.: 201346
Recurrent But Restricted: A Case of Eyelid Basal Cell Carcinoma Confined to the Dermis

First Author: Mariel Angelou ***PARULAN***
Co-Author(s): Justin ***JARDIOLIN***

Purpose: Basal cell carcinoma (BCC) is a slow-growing, locally invasive skin cancer arising from the epidermal basal cells. Recurrent basal cell carcinoma (BCC) of the eyelid invades beyond the dermis in approximately 40–60% of cases, with 10–20% extending into orbital tissues, especially in the medial canthus. We report a case of a recurrent basal cell carcinoma of the eyelid, which did not invade beyond the reticular dermis in a 75-year-old female Filipino.

Methods: A comprehensive ophthalmologic examination including orbital measurements was done. Complete laboratory work-up was done, as well as a contrast-enhanced cranial computed tomography scan with orbital cuts. Histologic testing on the obtained specimen confirmed the diagnosis.

Results: Patient came in with a 8-year history of left medial canthal mass of the lower lid which progressed in size. Patient had unremarkable past medical and ocular history. Patient underwent preliminary biopsy which revealed a lower lid mass with histopathologic findings consistent with a basal cell carcinoma. Patient underwent excision biopsy and showed basal cell carcinoma confined to the dermis. Patient underwent lid reconstruction with no observable recurrence of medial canthal mass.

Conclusions: Recurrent basal cell carcinoma of the lower lid most often presents with varying degrees of invasion of surrounding structures. The combination of radiographic and histologic findings will provide an accurate diagnosis. Complete surgical excision with careful monitoring of recurrence is the mainstay of treatment. Overall, the prognosis for patients who receive a timely and appropriate diagnosis and appropriate margin control during surgery is favorable.

Abstract No.: 201171
Self-evisceration in a 92-year-old female with untreated psychosis due to uremic encephalopathy: A case report

First Author: Ralph Orland ***LONTOC***
Co-Author(s): Marifel ***MONTENEGRO****,*
Catherine ***VIGO-MATIC***

Purpose: To report a case of self-inflicted evisceration in an elderly female with psychosis secondary to uremic encephalopathy, emphasizing the importance of comprehensive management. This case report explores the challenges and considerations involved in providing safe and effective ophthalmologic surgical care in elderly patients with multiple comorbidities.

Methods: A 92-year-old female with untreated chronic psychosis presented with a ruptured left globe after an agitated episode during which she violently grabbed her eye. In the emergency department, the patient was alert however uncooperative, limiting ophthalmologic assessment. Stabilization was initiated with bleeding control and wound cleaning. Sedation was administered to allow thorough examination and imaging. CT scan confirmed globe rupture. Internal Medicine was consulted after diagnostics which revealed previously undiagnosed chronic kidney disease requiring systemic stabilization prior to surgery. The patient underwent evisceration under general anesthesia. Postoperative management included systemic antibiotics and psychiatric evaluation.

Results: The patient successfully underwent emergency evisceration. Given the risk of further self-harm and instability, no orbital implant was placed. Continuous monitoring and coordination among all involved specialties allowed for uneventful recovery and prevention of further episodes.

Conclusions: Self-enucleation remains a rare but devastating manifestation of unmanaged psychosis. This case highlights the critical need for a multidisciplinary approach when treating medically and psychiatrically complex patients. Comprehensive systemic evaluation, preoperative planning, and coordinated postoperative care were essential in achieving a safe surgical outcome and reducing the risk of recurrence.

Abstract No.: 200730
"Hidden in Plain Sight" A Case of Abortive Cryptophthalmos of a 3 Year Old Female

First Author: Dennis Josh ***TAMAYO***

Purpose: To present a rare case of Cryptophthalmos of a 3 year old female and have a more favorable prognosis.

Methods: We are presented with a 3-year-old female who was referred to our institution due to an upper eyelid defect on the right eye. The patient is born to a 36-year-old mother, G5P4 (4013), full term via normal spontaneous delivery, with a birth weight of 2.8 kg and unremarkable newborn screening and hearing test. Visual potential is crucial to the timing of the surgery to prevent blindness or amblyopia.

Results: External eye examination showed a central to medial upper eyelid defect with skin attached to the superior 2/3 of the cornea, with madarosis, hyperemic bulbar conjunctiva with no eyelid movement upon closure. The patient was then operated on the left eye at five months with a Tarso-conjunctival flap on the lower lid, which has a more favorable prognosis compared to the right eye. The patient then underwent a Semi-circular flap on the upper lid of the right eye with the release of the fully keratinized skin membrane on the cornea. The patient tolerated the procedure well, with the visual potential remaining intact.

Conclusions: Abortive cryptophthalmos is a rare disease that requires a well-timed procedure and management crucial to the patient's visual potential. Extensive reconstruction of the eyelids can be complex for cosmesis and maintaining eye health. Priorities include preserving eyelid function, developing a stable lid margin, and ensuring an eyelid closure for ocular health.

Pediatric Ophthalmology

Abstract No.: 200936
A Case of Bilateral Ectropion in Collodion Baby Syndrome: Management in a Resource-Limited Setting

First Author: Jennifer ***BAWALAN***

Purpose: Collodion Baby Syndrome is a rare congenital disorder characterized by a taut, shiny parchment-like membrane encasing the newborn's body. To date, only around 270 cases are reported in history. These cases require multidisciplinary care due to risk of infection, fluid loss, temperature instability and corneal perforation.

Methods: We present the case of a baby girl born prematurely at 30 weeks, via CS to a 37-year-old G1P1 mother, due to malpresentation. At birth, she presented with generalized taut, parchment-like skin, jaundice, neonatal tooth, bilateral ectropion. She was transferred to our institution for work-up and management. Ophthalmologic evaluation revealed symmetric brows, a tight, parchment-like membrane covering both upper and lower lids, erythematous canthi with yellow crusted discharge, outward turning of the lid margins, seemingly absent lower lid lashes. Conjunctiva was nonhyperemic, there was no chemosis and no signs of corneal compromise.

Results: She was treated for coexisting neonatal pneumonia and neonatal tooth was removed by dental service. We gave her erythromycin eye ointment to be applied to the lids every 6 hours, and lubricant for the globes every 12 hours. Thermoregulation, hydration and treatment with blue light was done round the clock. Dermatology service started her on petroleum jelly 3-5 times a day. The parchment-like membrane eventually started desquamating with gradual decrease in ectropion.

Conclusions: Genetic testing was offered and the patient was discharged with maintenance of aggressive emollient treatment. Regular ophthalmologic follow up was advised to monitor for recurrence and to avoid corneal damage.

Abstract No.: 200415
Bilateral Inferior Oblique Y-split for IOOA and Manifest DVD

*First Author: Ricardo **VENTURA***
*Co-Author(s): Charmaine Grace **CABEBE***

Purpose: To present a novel technique called Y-splitting of the inferior oblique to manage both inferior oblique overaction and manifest dissociated vertical deviation.

Methods: Inferior oblique muscle overaction is common in strabismus cases, particularly in infantile esotropia and in some cases, in dissociated vertical deviation. In strabismus surgeries, the inferior oblique muscle procedures are quite unique and follows a distinct pattern, as compared to routine recti muscle surgeries. The most commonly performed surgeries on inferior oblique include its weakening, which are indicated when there is overelevation in adduction. Weakening procedures such as traditional inferior oblique anteriorization can cause anti-elevation syndrome, where due to anatomical changes in the inferior oblique muscle course and its associated neurovascular bundle, the vertical rotation is limited. Clinically, it can be witnessed as elevation deficit in abduction as well as in primary gazes.

Results: To minimize this untoward effect of anti-elevation syndrome, we performed a novel technique called "Y-splitting" of inferior oblique muscle with left lateral rectus recession, on a 22-year-old patient with 12PD exotropia, grade 3-4 inferior oblique overaction and manifest DVD. The results of this procedure have been excellent, with over 90% success rate for mild to severe inferior oblique overaction. Post-operatively, patient is orthophoria with no inferior oblique overaction. Residual DVD on the right was noted.

Conclusions: This procedure is effective in correcting hypertropia and DVD, while also minimizing anti-elevation syndrome commonly observed with traditional anteriorization techniques.

Abstract No.: 201155
Case report: Navigating eye complications of a 3-month old female infant diagnosed with Incontinentia pigmenti

*First Author: Jubaida **MANGONDATO AQUINO***
*Co-Author(s): Minnette **PANGANIBAN**, Alvin Anthony **SERRANO***

Purpose: We describe a 3-month old Filipino baby girl who was diagnosed to have IP (Incontinentia Pigmenti) and was managed for proliferative retinopathy of her left eye.

Methods: EUA (Examination under anesthesia), FA (Fluorescein angiography), and LIO (Laser Indirect Ophthalmoscopy) were done. EUA findings, fundus photos, and videos of FA were recorded accordingly.

Results: Patient presented with multiple swirling patterns of hyperpigmented blistering plaques on all her extremities. Fundus photo of the right eye showed clear media with a yellow-orange optic disc with distinct disc borders and a cup-to-disc ratio of 0.3. There were no noted retinal hemorrhages, exudates, or avascularized zones. Fundus photos of the left eye showed clear media with yellow-orange optic disc with distinct disc borders and cup-to-disc ratio of 0.3. There were no noted retinal hemorrhages or exudates. There were avascular areas seen in the peripheral temporal and nasal retina. FA of the left eye showed absence of foveal hypoplasia which is commonly seen in IP; foveal avascular zone was intact. The left eye FA arteriovenous phase showed patches of capillary non-perfusion on the peripheral retina with notable tortuosity of the peripheral vessel ends. LIO was done on the left eye at the avascularized zones, follow-up was done at 1 week, 1 month and 6 months thereafter.

Conclusions: Management of IP requires a multidisciplinary approach. All patients

with IP should be monitored from infancy to adulthood for the possible development of retinal complications and to avoid its crippling ophthalmic manifestations.

Abstract No.: 200814
Fine Adjustments: A Case of Large Angle Consecutive Exotropia caused by Stretched Scars

*First Author: Patricia Yukiji **VILLA***
*Co-Author(s): Kevin Jake **LOMIBAO***

Purpose: Consecutive exotropia, a challenging condition due to a lack of standardized surgical approaches and high rates of recurrence, develops in patients previously treated for esotropia. This study aims to present the case of a 28-year-old female with a significant 90 PD consecutive exotropia, seeking cosmetic improvement, who underwent bilateral medial rectus advancement and lateral rectus recession with adjustable sutures. This case highlights a surgical strategy for large-angle consecutive exotropia.

Methods: The patient underwent Bilateral Medial Rectus Advancement and Lateral Rectus Recession with Adjustable Sutures. Excessive scarring from the previous surgery and stretched scars were noted. Follow-up periods were postoperative weeks 1, 2, 5 and year 1. Post-operative eye alignment was assessed using APCT (Alternate Prism Cover Test) and orthotropia within 15PD was considered a successful result.

Results: On post-operative week 2, patient achieved an APCT result on Primary Gaze at 16PD (XT) Exotropia and Chin Up at 14PD XT. Exodrift was noted for Chin up at 16 PD XT after 3 weeks. No exodrift was noted after 1 year. This study has shown a dose effect relationship of the combined surgery for a large consecutive exotropia for the right and left eye at 15.8PD/mm and 13.8 PD/mm, respectively.

Conclusions: Bilateral Medial Rectus Advancement with Lateral Rectus Recession was an effective surgical method for our patient whose exotropia was caused by stretched scars, and is suggested in cases with higher preoperative exodeviation. The presence of postoperative exodrift indicates longer follow-ups for patients.

Abstract No.: 201347
Idiopathic Right Superior Rectus Contraction Syndrome (Jampolsky Syndrome) in a Filipino Male: A Case Report

*First Author: Michelle **DAGTA-ALABATA***
*Co-Author(s): Angel **ANCHETA JR.**, Emilio **MACIAS III**, Sharlene Marie **PRILE**, Cesar Angelo **VILLARIBA***

Purpose: Superior Rectus Overaction or Contracture Syndrome (SRSy) is a rare cause of strabismus characterized by abnormal contraction or shortening of the superior rectus muscle. This case report seeks to describe the evaluation, diagnosis, management and clinical outcomes of a healthy 36-year-old Filipino male presenting with outward and downward left eye misalignment since early childhood.

Methods: Strabismus examinations showed that the amount of upward eye misalignment (hypertropia) varied depending on the direction the patient looked and how his head was tilted. Twenty-seven prism diopters of right hypertropia was measured on primary gaze with the patient fixating using his left eye. There was also a five prism diopter difference in the upward drift of the eye when looking at near versus far objects. Outward eye deviation (exotropia) was also noted.

Results: Recession of the superior rectus and resection of the inferior rectus was done. One day post-operation while the patient was looking straight ahead with the left eye focusing, the hypertropia improved by 27 prism diopters, and the exotropia improved by 5 prism diopters. Extraocular muscle movements were noted to be full and equal for both eyes a week after the operation.

Conclusions: Superior Rectus Overaction or Contracture Syndrome is a rarely documented condition, reflecting limited recognition in current ophthalmic literature and underscoring the need for increased clinical awareness. Marked improvement in the vertical deviation

following superior rectus recession in this case highlights its potential as a primary intervention in isolated presentations without assciated strabismus or restrictive pathology.

Abstract No.: 200488
MODIFIED NISHIDA TECHNIQUE WITH MEDIAL RECTUS DISINSERTION, RECESSION AND BILATERAL LATERAL RECTUS PLICATION FOR STRABISMUS FIXUS SECONDARY TO A LONG STANDING ESOTROPIA

First Author: Joanne ***BOLINAO***
Co-Author(s): Kimberly Amanda ***COMIA***

Purpose: To present the clinical findings and surgical management of a 47-year-old male with long-standing restrictive esotropia. This highlights the use of a modified Nishida technique and staged bilateral lateral rectus plication, demonstrating improved ocular alignment, visual acuity, and patient satisfaction despite persistent abduction limitation and residual esodeviation.

Methods: Forced duction test confirmed the presence of a horizontal restriction and imaging showed absence of intracranial or intraorbital pathology, with no significant findings on the extraocular muscles. The patient underwent a modified Nishida technique with right medial rectus disinsertion and left medial rectus recession. A second stage bilateral lateral rectus plication was performed six months later to address the residual deviation.

Results: Postoperative outcomes showed marked improvement in ocular alignment and visual acuity of the affected eye, though still with a residual esodeviation, with no diplopia and with good patient satisfaction.

Conclusions: The case highlights a rare presentation of strabismus fixus secondary to a long-standing unilateral esotropia in an adult managed through a staged surgical approach including a modified Nishida technique, right medial rectus disinsertion, left medial rectus recession and bilateral lateral rectus plication. Chronic esotropia can become restrictive over time due to fibrosis even in the absence of trauma or previous ocular surgery. While the modified Nishida technique has shown promise in previous studies, correcting around 50 PD ET when combined with medial rectus recession, its role in restrictive strabismus remains under documented. Post-operative results of medial rectus disinsertion also remain inconsistent and depend on underlying factors.

Abstract No.: 200414
Modified Nishida with Superior Rectus Recession for Vertical Diplopia Secondary to Non-specific Orbital Inflammation

First Author: Minette ***PANGANIBAN***
Co-Author(s): Charmaine Grace ***CABEBE***

Purpose: Non-specific orbital inflammation (NSOI) is the third most commonly diagnosed orbital disease. It is divided into different entities with myositis occurring in 20.3%. The second most frequently involved rectus muscle is superior rectus. We report a case of a patient with NSOI who underwent muscle surgery for intractable diplopia.

Methods: A 32-year-old female with chronic left myositic-type NSOI was referred due to left hypertropia of 50PD and vertical diplopia. Limitation on upgaze and positive forced duction test on left was noted. Imaging revealed thickened left superior rectus with interval increase in size on serial images. Patient underwent left superior rectus recession with Modified Nishida muscle transposition of the left medial and lateral rectus. Intraoperatively, the left superior rectus was tight with fibrosis. Six weeks after, patient had no diplopia on primary gaze with less than 10 PD hypertropia.

Results: NSOI is a non-infectious inflammatory condition of the orbit, characterized by acute symptoms such as pain, proptosis, edema, and diplopia. Extraocular muscle is the third most common localization of inflammation which presents as painful restrictive myopathy. Most have single affected muscle with the medial rectus as the most commonly involved. Mainstay treatment is systemic immunosuppression. Once disease is in remission, residual symptoms

such as intractable diplopia can be surgically treated for better functional outcome.

Conclusions: NSOI comprises a heterogenous group of inflammatory disorders affecting the orbit. A systematic and comprehensive characterization is imperative so that prognostication, medical and surgical management of this disorder can be further refined.

Public Health, Low Vision & Genetics

Abstract No.: 200660
A Glimpse into Darkness: A Case of EYS-Gene-Associated Retinitis Pigmentosa

*First Author: Manuel Benjamin **IBAÑEZ IV***
*Co-Author(s): Angelica Antoinette **VEGA***

Purpose: To present a case of EYS-Gene-Associated Retinitis Pigmentosa.

Methods: Case Report

Results: Retinitis Pigmentosa is a hereditary retinal dystrophy characterized by progressive peripheral vision loss and nyctalopia. We report a case of a 13-year-old male who presented with a 4-year history of bilateral, progressive peripheral blurring of vision and nyctalopia. The patient's past medical, ocular, birth and perinatal history were unremarkable. Multigenerational pedigree analysis showed the patient to be the only affected family member. There is no history hearing loss, miscarriages, developmental delay and consanguinity in the family. Examination revealed bilateral reduced visual acuity (20/120-20/40), poor color vision (Ishihara 2/16), characteristic bone-spicule pigmentation, attenuation of retinal vessels, early optic nerve pallor and constricted visual fields without inflammatory signs or anterior segment abnormalities. Optical coherence tomography revealed bilateral parafoveal loss of photoreceptors and electroretinogram shows abnormal light- and dark-adapted responses consistent with rod and cone pathology. Genetic testing identified a variant in the EYS gene which is associated with earlier loss of visual acuity and visual fields compared to other RP-associated genes. Identifying the EYS gene allowed targeted genetic counselling and prognostication. Management included genetic counseling, screening of family members, low vision rehabilitation, patient education and regular monitoring.

Conclusions: This case underscores the crucial role of early diagnosis through a stepwise multimodal approach and the value of precision medicine through genetic testing.

Abstract No.: 201369
Profile of Glaucoma Patients Referred to Low Vision Services in Public and Private Multispecialty Eye Centers in the Philippines

*First Author: Nilo Vincent **FLORCRUZ***
*Co-Author(s): Zadkiel **VELASQUEZ***

Purpose: This study aims to determine the demographic and clinical profile of glaucoma patients referred to low vision rehabilitation in the Philippine General Hospital and American Eye Center from January 2020 to December 2024.

Methods: Charts of all patients with a diagnosis of glaucoma attending low vision rehabilitation at PGH and AEC from January 2020 to December 2024 will be included. Data that will be extracted include age, sex, reason for referral, source of referral, clinical diagnosis, severity of glaucoma, visual acuity, visual field parameters, and the low vision aids offered

Results: To follow

Conclusions: Hypothesis: Most of these patients referred to low vision clinic are older adults, referred by an ophthalmologist, have functionally monocular vision, and have a severe defect in their perimetry. Furthermore, we surmise that patients in a public eye institute, such as PGH will have a more severe clinical profile compared to those being seen in a private specialty clinic, such as AEC.

Abstract No.: 200544

Retinitis Pigmentosa Presenting as Pigmented Paravenous Retinochoroidal Atrophy-like pattern in a Filipino Male with a Novel Heterozygous Mutation in MERTK

First Author: Manuel Benjamin Iv ***IBAÑEZ***
Co-Author(s): Reuben Mari ***MERCADO***

Purpose: Mutations in MERTK are rare and represent only 1% of autosomal recessive retinitis pigmentosa (aRP). It typically presents with the classic triad of RP of optic nerve pallor, vessel attenuation, and bony spicule-like pigments in the periphery or midperiphery. In this case, we characterize a patient with retinitis pigmentosa (RP) harboring a bi-allelic mutation in MERTK and presenting with an atypical fundus more similar to pigmented paravenous retinochoroidal atrophy.

Methods: An inherited retinal dystrophy panel was requested. Optical coherence tomography (OCT), fluorescein angiography (FA), fundus photography with autofluorescence (FP with FAF), visual field perimetry (VFP), and full-field electroretinography (FFERG) were used to evaluate retinal structure and function.

Results: A novel homozygous mutation in MERTK c. 1333C>T (p.Arg445)* was detected in our patient. This variant has not been reported in literature (Clinvar), as well as in known population databases (ExAC, gnomAD). Our patient presented with a 3-year history of progressive blurring of vision, night blindness, and loss of peripheral vision. Fundus exam showed retinal degeneration and bony spicule distribution similar to pigmented paravenous retinochoroidal atrophy.

Conclusions: This case identifies a novel pathogenic mutation in MERTK c.1333C>T in a Filipino patient with a severe and atypical phenotype of autosomal recessive RP. Identifying novel gene mutations accentuates our understanding of Mendelian genetic diseases and opens doors to novel therapeutic targets. Its discovery may help in expanding the mutational and phenotypic spectrum of RP caused by MERTK.

VIDEOS

APVRS

Intraocular Inflammation, Uveitis & Scleritis

Abstract No.: 201377
Demonstration of Amsler Sign in a Uveitic Cataract: A Case of Fuchs Heterochromic Iridocyclitis (FHI)
*First Author: Maria Isabela **DE GUIA***
*Co-Author(s): Anselmo David **ULTRA***

Purpose: To highlight the intraoperative appearance and management of the Amsler sign during phacoemulsification in a patient with FHI and a visually significant uveitic cataract.

Methods: A 45-year-old male presented with a five-year history of progressive blurring of vision in the right eye, initially described as a whitish line and later worsening to dense, cloudy vision with glare. He had been previously advised of cataract surgery but was lost to follow-up. Clinical examination revealed features consistent with FHI: fine stellate keratic precipitates, diffuse iris atrophy, no posterior synechiae, and a posterior subcapsular cataract. Intraocular pressure was normal, and no active inflammation was noted. The patient was pretreated with topical prednisolone acetate 1% four times daily prior to surgery. Phacoemulsification was performed under topical anesthesia. Upon anterior chamber entry, brisk bleeding from the angle was observed—classic for the Amsler sign.

Results: The hyphema was self-limiting and controlled with irrigation and viscoelastic tamponade. Surgery proceeded uneventfully, and an intraocualr lens was implanted in the capsular bag. The patient was maintained on tapering topical steroids postoperatively. At one month, uncorrected visual acuity reached 20/20, with a quiet anterior chamber and no inflammatory rebound.

Conclusions: The Amsler sign is a hallmark intraoperative feature of FHI. Anticipating and managing this iris bleeding is key to achieving optimal surgical outcomes in uveitic cataract cases.

Abstract No.: 201258
Retinal and Vitreous Biopsy Reveals Cysts of Toxoplasma Gondii in an Atypical Case of Bilateral Necrotizing Retinitis
*First Author: Uma **NAHAR***
*Co-Author(s): Reema **BANSAL**, Ashutosh **GUPTA**, Nalini **GUPTA**, Suryaprakash **SHARMA***

Purpose: Retinitis in an immunocompromised patient is often extensive. Diagnosis is difficult due to atypical presentation, and empirical treatment is initiated as a desperate attempt to salvage the eyes. We presented a case of bilateral necrotizing retinitis where vitreous biopsy, subretinal fluid, and retinal biopsy demonstrated tachyzoites (trophozoites) of Toxoplasma gondii (T. gondii).

Methods: A 47-year-old woman on immunosuppressive therapy for systemic lupus erythematosus (SLE) had decreased vision (hand movements) in both eyes for one month. She had received oral steroids before presenting to our center. Fundus examination revealed extensive bilateral necrotizing retinitis. Serum IgG and IgM were raised for T. gondii. Aqueous fluid real-time polymerase chain reaction was positive for T. gondii. Oral and intravitreal anti-toxoplasmosis therapy was started. The right eye developed retinal detachment. She underwent pars plana vitrectomy with scleral band and silicon oil tamponade.

Results: Cytology of vitreous and subretinal fluid, and histopathology of retinal biopsy revealed tachyzoites of T. gondii. At three months, the retina was attached.

Conclusions: Bilateral necrotizing retinitis is an ophthalmic emergency. An early vitrectomy with vitreous and retinal biopsy, and multidisciplinary

approach provided definitive diagnosis of T. gondii in a challenging case of atypical retinitis.

Abstract No.: 200459
The Dance of the Sword of Damocles on Ocular Surface

*First Author: Pallavi **RAJ***
*Co-Author(s): Kshitiz **KUMAR***

Purpose: To demonstrate the presentation and management of spontaneously extruded glaucoma drainage device (GDD) tube through cornea with its sequelae.

Methods: A young man who had undergone multiple surgeries following retinal detachment with secondary glaucoma presented with excessive tearing and redness with discharge of several month duration. At presentation there was an extruded tip of GDD sitting on a self-sealed corneal perforation at 11 o'clock meridian with fibrosis with pulled up occlusio pupillae, The tube was projecting up toward the undersurface of lid and moved like windshield wiper on the corneal surface. Patient underwent exploratory surgery to remove the GDD and reconstruct the anterior segment structures. It was found that the GDD initially thought to be Ahmed glaucoma valve (AGV) turned out to be Aurolab aqueous drainage implant (AADI) with underlying scleral melt and perforation.

Results: The patient underwent meticulous wound exploration with extraction of AADI followed by scleral perforation repair. In the posterior segment management, anterior chamber reformation with construction of secondary pupil and pars plana lensectomy with vitrectomy was completed. Postsurgery patient achieved a quiet ocular surface with good cosmesis with eye saved from going into phthisis altogether.

Conclusions: The video highlights the rarest of rare AADI tube extrusion and the difficulties faced during its removal with subsequent management of both compartments.

Abstract No.: 201235
When Medical Management Falls Short: Tailored Surgical Strategies in Acute Retinal Necrosis (ARN)

*First Author: Rohan **CHAWLA***
*Co-Author(s): Keerthana **KASI**, Siddhartha **RAO BS**, Nawazish **SHAIKH***

Purpose: To emphasize the indispensable role of early, individualized surgical intervention in ARN, highlighting how we can salvage vision when medical therapy appears to have failed.

Methods: This curated video series from our clinical practice presents three distinct cases of ARN, each requiring a nuanced surgical approach. All patients were initiated on standard antiviral and corticosteroid regimens. Case 1: A 19-year-old male with clear media showed peripheral retinal thinning and impending breaks. He underwent laser delimitation to prevent progression. Case 2: A 40-year-old female with severe vitritis and poor media clarity precluding laser underwent prophylactic vitrectomy before detachment occurred. Case 3: A 25-year-old female presented with total retinal detachment and dense vitritis despite medical therapy. She underwent 25-gauge pars plana vitrectomy, membrane peeling, and silicone oil tamponade.

Results: All three patients achieved favorable anatomic outcomes. Laser in Case 1 halted disease progression. Prophylactic vitrectomy in Case 2 prevented detachment from occurring and media was cleared. Case 3 achieved retinal reattachment and visual rehabilitation.

Conclusions: Medical therapy is foundational but often insufficient in ARN. This video series emphasizes recognizing when to escalate care surgically—whether by laser delimitation, therapeutic vitrectomy, or prophylactic vitrectomy. By integrating media clarity and retinal attachment status into the decision-making process, we present an algorithm that we use in our practice, which has resulted in favorable outcomes.

Ocular Imaging

Abstract No.: 200136
Voila – It Closed During Surgery!

First Author: Vivek ***DAVE***
Co-Author(s): Khushboo ***CHAUHAN***

Purpose: To demonstrate the real-time intraoperative closure of a macular hole using intraoperative optical coherence tomography (iOCT).

Methods: This surgical video highlights a macular hole closure noted dynamically on the iOCT. Subsequent to pars plana vitrectomy, iOCT confirmed the presence of a full-thickness macular hole. Internal limiting membrane (ILM) peeling was thereby done, and iOCT imaging was used to confirm successful approximation of the retinal edges intraoperatively.

Results: Intraoperative OCT provided high-resolution, cross-sectional images that allowed precise visualization of macular hole dynamics during surgery. Immediate feedback facilitated technique adjustments, ensuring optimal closure without relying solely on postoperative imaging. Successful anatomical closure of the macular hole was confirmed intraoperatively and subsequently on postoperative OCT.

Conclusions: Small macular holes can close during surgery itself. iOCT serves as a valuable tool in enhancing surgical precision by enabling real-time visualization of macular hole closure.

Ocular Oncology & Pathology

Abstract No.: 200648
Melanoma, Meet My Cutter: A Surgical Take-Down

First Author: Vishal ***RAVAL***
Co-Author(s): Dibya ***PRABHA***

Purpose: To illustrate the role of surgical resection in the management of choroidal melanoma, highlighting its indications, benefits, and place among current treatment modalities.

Methods: A 46-year-old female presented with floaters in the right eye for one year, without any history of ocular trauma or systemic illness. Fundus examination revealed an 8 × 7 × 5 mm pigmented choroidal lesion with dispersed vitreous pigment, located 2 mm inferior to the disc and 4 mm from the fovea. B-scan showed acoustic hollowing and a collar-stud configuration, consistent with choroidal melanoma with Bruch membrane rupture. A 25-gauge pars plana vitrectomy was performed under local anesthesia, with intraoperative tumor biopsy, endoresection, endolaser photocoagulation, and silicone oil tamponade. Sample sent for histopathological examination and immunohistochemistry.

Results: On postoperative day 1, best-corrected visual acuity was 20/125. The retina remained attached under silicone oil, with hemorrhage and bare sclera evident at the lesion site. Optical coherence tomography confirmed the absence of vitreous pigment and visualized the bare scleral bed. Histopathological evaluation showed loose clusters of spindle and pigmented polygonal cells, with strong positivity for Melan-A and HMB-45 markers.

Conclusions: Surgical endoresection can offer a valuable alternative in selected cases of choroidal melanoma, especially when the tumor is accessible and vision-sparing is feasible. This case underscores the potential of intraocular tumor resection in achieving local tumor control, reducing tumor burden, preserving ocular anatomy, and possibly improving visual and cosmetic outcomes in well-selected patients.

Retina (Medical)

Abstract No.: 201250
Cataract Surgery in Neovascular Glaucoma Secondary to Central Retinal Vein Occlusion Status Post-Trabeculectomy

*First Author: Alexander **REYES***
*Co-Author(s): Isabel Mara **CAPARROS***

Purpose: To showcase the necessary preoperative and postoperative preparations that were made to successfully perform cataract surgery in a patient who previously underwent a trabeculectomy.

Methods: The contemplated procedure was phacoemulsification with a monofocal lens implant under local anesthesia. On preoperative assessment, the patient was noted to have a small pupil unresponsive to topical mydriatics with an intumescent cataract. A Y hook instrument and iris hooks were prepared before the procedure. Intraoperatively, there were findings of synechiae, which warranted synechiolysis and stretching of the pupil. Incisions made were also carefully planned, as the patient previously underwent a trabeculectomy to avoid affecting the bleb. Phacoemulsification was successfully done with the insertion of a monofocal intraocular lens implant.

Results: The visual acuity of the patient prior to cataract formation was counting fingers at two feet. Preoperative visual acuity was hand movement with good light projection. The goal of the surgery was to maximize the patient's visual potential. The visual acuity improved after cataract surgery and returned to the patient's baseline vision.

Conclusions: Cataract surgery in complicated cases necessitates complete preoperative assessment and preparations. Maximizing the visual potential of patients with retinal pathologies may still include cataract surgery. However, it is important to discuss visual potential and possible complications. Preoperative and intraoperative anticipation of possible challenges and complications is key to a successful procedure.

Abstract No.: 201337
Management of Recurrent Vitreous Cavity Hemorrhage Following Vitrectomy in Proliferative Diabetic Retinopathy

*First Author: Saravanan **VEERAPPAN***

Purpose: In this video, we describe the various causes of recurrent vitreous cavity hemorrhage and the ways of managing these disease entities.

Methods: Recurrent vitreous cavity hemorrhage is defined as the occurrence of a repeat bleed two or more weeks after successful vitrectomy. The causes include reproliferation of new vessels, anterior hyaloidal fibrovascular proliferation, and entry site neovascularization.

Results: The various interventions include removal or cautery of the entry site neovascularization, surgical removal of reproliferated new vessels, and retinectomy to remove anterior hyaloidal fibrovascular proliferation (AHFVP), as well as communication between the anterior chamber and vitreous cavity.

Conclusions: Identifying the cause of recurrent vitreous cavity hemorrhage and managing it accordingly gives successful results in this unfortunate condition.

Retina (Surgical)

Abstract No.: 200273
A Novel Indigenous Device for Scleral Fixated Intraocular Lens (SFIOL) Implantation

*First Author: Trupti **KADAM***
*Co-Author(s): Vandana **AKSHAY IYER**, Puja **HINGORANI-BANG**, Rajesh **PATTEBAHADUR**, Shraddha **PAWAR**, Sagarika **SNEHI***

Purpose: To demonstrate the use of a novel indigenous device for SFIOL implantation.

Methods: A 26-gauge, 1/2-inch hypodermic needle, commonly available in the operating room (OR), is bent 2 mm from the hub. Two

number 240 silicone band bits, usually available for encirclage in retinal surgery, are railroaded onto the needle up to the hub. The tip is broken to make it blunt. This device is used to guide the haptic of a three-piece polymethyl methacrylate (PMMA) lens extraocularly and to support the lens during implantation.

Results: The device stabilizes the SFIOL during surgery and prevents slipping of the haptic during maneuvering.

Conclusions: This device can be made in any OR and is foolproof against slippage, bending, or chipping of the haptic during the procedure.

Abstract No.: 200657
A Step-by-Step Beginner's Guide to Scleral Buckling Surgery: An Educational Video for Vitreoretinal Trainees

*First Author: Upendra **BABU***
*Co-Author(s): Aayesha **KHANUM**, Joshmitha **M S**, Venugopal **REDDY***

Purpose: Scleral buckling remains a fundamental surgical technique for rhegmatogenous retinal detachment (RRD) repair, particularly in young phakic patients and cases with uncomplicated breaks. However, many trainees lack exposure to this technique due to declining case volumes and the perceived learning curve.

Methods: We have made a step-by-step detailed video including patient selection, surgical approach, precautionary measures, and possible mistakes we could avoid during scleral buckling surgery.

Results: This video serves as a comprehensive yet accessible resource for surgeons, bridging the gap between theoretical knowledge and practical execution.

Conclusions: Despite the growing popularity of pars plana vitrectomy (PPV), scleral buckling offers distinct advantages, including lower rates of postoperative cataract progression and vitrectomy-related complications. By standardizing the foundational steps of scleral buckling, we aim to preserve this skill in the surgical armamentarium and encourage its appropriate use in selected RRD cases.

Abstract No.: 200200
A Stitch in Time Saves Nine

*First Author: Richa **NYODU***
*Co-Author(s): Dr Manisha **AGARWAL**, Akash **CHOUDHARY***

Purpose: Lens-sparing metallic intraocular foreign body (IOFB) removal was performed in a phakic patient, with the IOFB located anteriorly at the pars plana. The best-corrected visual acuity (BCVA) preoperatively was 6/6p.

Methods: The procedure involved 25-gauge pars plana vitrectomy with perfluoroctane, IOFB removal, and fluid-air exchange, all performed under local anesthesia with general vision protection.

Results: The patient was left phakic, with a successful removal of the IOFB.

Conclusions: Postoperative BCVA remained at 6/6p. Good retinal indentation and careful management during vitrectomy preserved the crystalline lens, thereby avoiding the need for additional surgery for secondary intraocular lens implantation.

Abstract No.: 200970
A Surgical Odyssey of Giant Retinal Tear Repairs

*First Author: Thirumalesh **MOCHI BASAVARAJ***
*Co-Author(s): Mousumi **BANERJEE**, Aayesh **KHANUM***

Purpose: The provided video comprehensively outlines the management of a giant retinal tear, accompanied by retinal detachment which is inherently complex. It elucidates the appropriate course of action in such scenarios, particularly when they are associated with more intricate conditions such as an associated macular hole and subretinal proliferative vitreoretinopathy (PVR).

Methods: We use a series of case scenarios to demonstrate the nuances of repair of retinal detachment with giant retinal tear and PVR.

Results: The results are demonstrated in the form of postoperative pictures.

Conclusions: Vitreoretinal surgery, coupled with the execution of appropriate maneuvers, can significantly enhance the likelihood of successful outcomes, even in intricate scenarios such as giant retinal tears.

Abstract No.: 201284
A Young Diabetic Tractional Retinal Detachment

*First Author: Haemoglobin **PARIDA***

Purpose: Surgical treatment of diabetic tractional retinal detachment.

Methods: A 36-year-old lady with diabetes presented to us with defective vision for two months. On evaluation, the right eye had proliferative diabetic retinopathy with combined tractional retinal detachment, with best-corrected vision of hand movements. The left eye was operated earlier with silicone oil tamponade. The right eye was taken up for 23-gauge pars plana vitrectomy. It was a combined tractional rhegmatogenous retinal detachment with extensive fibrovascular proliferation over the posterior pole. Bimanual chandelier-assisted dissection and delamination were performed to remove the adherent membranes. Preservative-free triamcinolone acetonide was injected into the vitreous to stain schitic posterior vitreous sheets, which were removed with Tano forceps. Perfluorocarbon liquid was used to stabilize the retina, and brilliant blue G (BBG)–assisted internal limiting membrane was peeled. Endolaser was applied and fluid-air exchange was performed with silicone oil as tamponade, along with intravitreal bevacizumab.

Results: At one month postoperatively, the retina was attached with vision of counting fingers at close range. The retina remains attached under silicone oil for six months.

Conclusions: Proliferative diabetic retinopathy in the younger age group can be more aggressive and have faster progression. Hence, they should undergo close monitoring and need early surgical intervention.

Abstract No.: 200612
Adventures and Misadventures in the World of Vitreous Hemorrhage (VH) – A Fellow's Journey

*First Author: Daniel Jose **MENDOZA***
*Co-Author(s): Carlo **NASOL***

Purpose: VH is a major cause of visual impairment, with increasing incidence in Southeast Asia. While diabetic retinopathy remains the leading etiology, each case requires a tailored surgical approach. The severity of VH varies, and as in other vitreoretinal diseases, surgeons must be prepared for intraoperative surprises — both favorable and adverse. Preoperative assessments provide a roadmap, but the surgical course can take unexpected turns.

Methods: This presentation showcases surgical videos highlighting various intraoperative scenarios, emphasizing strategic decision-making in VH cases with different underlying pathologies.

Results: Video 1 – VH secondary to CRVO with prior PRP; Video 2 – VH with tractional retinal detachment linked by a broad peripapillary sheet; Video 3 – VH with chronic bullous retinal detachment (B-scan); Video 4 – VH with open-funnel RD (B-scan); unexpected choroidal neovascularization after clearing hemorrhage; Video 5 – VH with adherent ERM; iatrogenic macular tear during peeling.

Conclusions: A straightforward case can turn unexpectedly complex, while a seemingly difficult one may prove more manageable. This unpredictability highlights the need for adaptability, sound judgment, and a deep understanding of retinal pathology. At surgical crossroads, decisions must be guided by clear clinical reasoning rather than impulse. Knowing when to proceed, when to pause, and when to pivot is key to achieving the best outcomes.

Abstract No.: 200339
Against All Odds: Novel Sandwich Tamponade Technique in Staged Vitreoretinal Surgery for Complex Retinal Detachment Under Visa Time Constraints

*First Author: Shweta **SINGH***
*Co-Author(s): Gauri **KHARE**, Obuli Ramachandran **NANDHAKUMAR**, Kritika **SINGH***

Purpose: To demonstrate a novel staged vitreoretinal surgical approach utilizing innovative sandwich tamponade technique for complex chronic retinal detachment under severe time constraints.

Methods: A 45-year-old Somali woman presented with four-month vision loss (3/60) on a 30-day visa. Examination revealed chronic subtotal retinal detachment with inferotemporal dialysis, proliferative vitreoretinopathy grade C-2, and retinal thinning. Retinal pathology ruled out scleral buckling; visa constraints precluded long-term oil tamponade. Stage 1: pars plana vitrectomy, posterior vitreous detachment induction, membrane removal, perfluorocarbon liquid (PFCL) injection, internal limiting membrane peeling, 360-degree endolaser, and novel 80:20 PFCL:silicone oil sandwich tamponade. Stage 2 (day 14): complete oil/PFCL removal with air tamponade for flight fitness.

Results: Stage 1 achieved complete retinal reattachment under sandwich tamponade. The 80:20 PFCL:oil ratio provided optimal positioning while facilitating removal. Stage 2 confirmed stable attachment under saline. Air tamponade absorbed completely within seven days. Visual acuity improved from 3/60 to 6/24. Patient achieved flight clearance day 27 with attached retina and functional vision. No complications occurred.

Conclusions: Complex vitreoretinal pathology with social constraints requires adaptive surgical innovation. Novel 80:20 PFCL:silicone oil sandwich tamponade offers advantages in staged surgery by maintaining position while enabling predictable removal. Adaptive planning achieves excellent outcomes when standard protocols require modification for patient-specific circumstances.

Abstract No.: 200225
Against All Odds: The Remarkable Recovery of a Tiny Eye

*First Author: Jayant **KUMAR***
*Co-Author(s): Pranshu **GOEL**, Veer **SINGH**, Shishir **VERGHESE***

Purpose: To report a challenging surgical case where rhegmatogenous retinal detachment in a microphthalmic eye was well managed by thoughtful stepwise planning and surgical execution.

Methods: An 18-year-old Asian female with bilateral severe microphthalmia and nystagmus developed retinal detachment in her right eye, which was confirmed by B-scan ultrasonography. She also had a developmental cortical cataract, and no posterior breaks were noted upon examination. Pars plana vitrectomy could not be performed in a routine manner due to a corneal diameter of 5 mm and a crystalline lens occupying the bulk of the globe. The surgeon decided to proceed with encirclage, followed by reassessment, and, if necessary, to perform a vitrectomy using either an indirect ophthalmoscope or endoscopic vitrectomy in a second sitting. A major challenge in hooking the muscles was the small size of the eye, prompting the surgeon to innovatively use a bent visco-cannula as a muscle hook. Scleral pockets were created with care to avoid perforation, and a 240 band was used for encirclage.

Results: On postoperative day 1, the retina was flat, as confirmed by B-scan, and the patient's best-corrected vision in that eye was finger counting at 3 feet, which was close to her previous vision. This obviated the need for vitrectomy, and the patient's crystalline lens was well preserved.

Conclusions: Our case highlights the importance of scleral buckling technique, even in today's era of advanced vitrectomy. Also, it emphasizes on the critical role of never writing

off any difficult case, and to thoughtfully think of possible solutions in vitreo-retina practice.

Abstract No.: 200853
Ahmed Glaucoma Valve (AGV) Tube Blockage With Vitreous – Which Is Ideal, Anterior or Complete Vitrectomy?

First Author: Manoj ***SHETTIGAR***
Co-Author(s): Vivek ***DAVE***

Purpose: To describe a case of AGV tube blockage with vitreous in an aphakic eye and its management.

Methods: This video file describes a case of AGV implantation in an eye with aphakia and keratoplasty done. The patient, otherwise doing well with controlled pressures, presented with a sudden rise of intraocular pressure. Evaluation showed tube blockage with vitreous. the patient was taken up for surgery. An anterior vitrectomy was done, and the tube block was relieved. Diluted triamcinolone crystals were injected at the mouth of the tube, and their movement across the tube toward the valve was noted, thus confirming the patency of the tube.

Results: The tube, however, got reblocked with peripheral vitreous after a few months. The patient was taken up again for a vitrectomy, this time with complete removal of the vitreous with base shaving. Following this, there has been no tube block noted in follow-up for the past one year.

Conclusions: A complete pars plana vitrectomy with removal of the peripheral vitreous is important to prevent tube blockage. Triamcinolone crystals can be used to check the patency of the tube intraoperatively during surgery to relieve tube blockage.

Abstract No.: 200807
An Unexpected Finding in the Ophthalmology Accident and Emergency Department

First Author: Chris ***TENDO***

Purpose: To highlight an unusual cause for a retinal detachment.

Methods: A case video of the unusual retinal detachment in an 18-year-old patient with a hole at the colobomatous optic disc.

Results: Successful reattachment of the retina with return to baseline vision.

Conclusions: Use of key management techniques during the vitrectomy in the management of a young patient with a retinal detachment, which has allowed the patient to return to their normal life.

Abstract No.: 200170
Bimanual Ingenuity Under Chandelier Illumination

First Author: Saarang ***HANSRAJ***

Purpose: To present four circumstances where bimanual surgery with chandelier illumination was used to achieve a good surgical outcome.

Methods: We present four cases requiring bimanual surgery with chandelier illumination. These include operating on a retinal detachment with a giant retinal tear in a young phakic patient, bimanually achieving posterior vitreous detachment in a combined retinal detachment, placing an amniotic membrane graft after retino-thyroidectomy in a traumatic retinal detachment, and for performing pars plana lensectomy in an eye with microcornea and retino-choroidal coloboma.

Results: All patients are doing well with good anatomical and functional outcome.

Conclusions: While bimanual surgery may be used for membrane delamination in diabetic retinopathy or chandelier light may be used for scleral buckling, these four scenarios were more unusual and required innovative bimanual maneuvers. Our video shows how bimanual surgery under chandelier lighting was the only way to achieve success.

Abstract No.: 200677
Buckling the Odds: Reviving Scleral Buckling in Complex Retinal Detachments

*First Author: Pradeep **VENKATESH***
*Co-Author(s): Siddhartha **RAO B S**, Nawazish **SHAIKH***

Purpose: To demonstrate the continued relevance and effectiveness of scleral buckling in the management of complex and unconventional retinal detachment scenarios in the modern vitrectomy era.

Methods: Three cases of retinal detachment with varying complexities were managed using modified scleral buckling techniques. Case 1: A 30-year-old phakic male presented with redetachment under silicone oil following prior vitrectomy for a large inferior retinal break. He underwent an inferior scleral buckle with silicone oil tap to manage intraocular pressure. Case 2: A patient with a history of open globe injury and cataract surgery presented with a fresh macula-off detachment. Due to dense posterior capsular opacification and optic capture, the break could not be localized preoperatively. An endoilluminator-assisted scleral buckle was successfully performed. Case 3: A 20-year-old phakic male with trauma-induced nasal giant retinal tear and localized subretinal fluid failed initial laser delimitation and was subsequently managed with scleral buckling combined with gas injection.

Results: All three patients achieved anatomical retinal reattachment on follow-up. No intraoperative or postoperative complications were noted. Visual improvement was consistent with the extent of macular involvement and duration of detachment.

Conclusions: These cases highlight the adaptability and efficacy of scleral buckling in selected complex retinal detachments, even in the current era dominated by minimally invasive vitrectomy. With appropriate case selection and technique modifications, scleral buckling remains a valuable and underutilised surgical modality.

Abstract No.: 201104
Chandelier to the Rescue: A Tale of Chandelier-Assisted Bimanual Removal of a Metallic Foreign Body

*First Author: Jeet **PATEL***
*Co-Author(s): Syed Mohideen **ABDUL KHADER**, Ram Sudarshan **RAVINDRAN***

Purpose: A 45-year-old patient came to our outpatient department with history of ocular trauma to the right eye while cutting stone. He underwent a full-thickness corneal tear repair at an outside hospital. Presenting best-corrected visual acuity was 4/60. Ocular examination showed corneal sutures with a traumatic cataract. B-scan showed a hyperreflective echo with back shadowing. Computed tomography scan revealed an intraocular foreign body (IOFB) penetrating the retina and impinging on the medial rectus muscle.

Methods: We proceeded with the right eye cataract extraction with pars plana vitrectomy (PPV) with IOFB removal and silicone oil injection. After cataract extraction with a superior sclercorneal tunnel, a 25-gauge three-port PPV was made. Core vitrectomy was done. Posterior vitreous detachment induced; foreign body removal through enlarged sclerostomy failed. A chandelier was placed and bimanual technique was used to lift the IOFB safely. The IOFB was removed through the sclerocorneal tunnel.This was followed by base dissection, endolaser and silicone oil injection. The IOFB was 16.8 mm long.

Results: On postoperative day 1, the retina was attached under silicone oil. There were no signs of inflammation on the first follow-up visit two weeks later. Three months later, the patient underwent silicone oil removal (SOR) with scleral-fixated intraocular lens (SFIOL) using a foldable multipiece IOL. One month after SOR and SFIOL were done, the final visual acuity of the patient was 6/12.

Conclusions: This case highlights the importance of chandelier in removal of a long foreign body. Chandelier allows the surgeon to perform controlled maneuver in certain

situations to prevent iatrogenic damage to the retina.

Abstract No.: 201081
Clearing the Hemorrhage : Surgical Insights Into Hidden Fibrovascular Proliferations (FVP)

*First Author: Santosh **KUMAR***
*Co-Author(s): Rohan **SURESH NINAN***

Purpose: To demonstrate a systematic approach to identifying and delicately dissecting FVP concealed beneath dense vitreous hemorrhage (VH) in a patient with proliferative diabetic retinopathy (PDR) and coexisting branch retinal vein occlusion (BRVO), with emphasis on managing retinal breaks and ensuring atraumatic membrane removal using meticulous technique.

Methods: A 25-gauge vitrectomy was done for dense VH in a known PDR patient. Post-core vitrectomy, an inferotemporal BRVO with a large adherent clot of 3-4 clock in peripehry and a flat FVP was noted. Bimanual dissection with chandelier light enabled safe peripheral membrane removal near schitic breaks, with hemostasis and quadrant-wise PVD induction ensuring minimal traction.

Results: Complete removal of dense VH and FVP was achieved despite iatrogenic breaks, without inducing bullous retinal detachment. Bimanual dissection enabled safe peripheral clot and membrane removal. Hemostasis was maintained, and the retina remained well attached with no intraoperative complications.

Conclusions: In dense VH with flat FVP and vascular occlusions, a stepwise, bimanual approach with quadrant-wise PVD induction ensures safe peripheral dissection. Gentle break handling, hemostasis, and minimal traction are critical for preserving retinal integrity and optimizing outcomes.

Abstract No.: 200920
Combined Lamellar Scleral Incision and Endoscopic Vitrectomy for Removal of a Giant Choroidal Melanoma: A Case Report

*First Author: Shuai **SHENG***

Purpose: Choroidal melanoma, the most common adult intraocular malignancy, poses significant threats to vision and life due to its high metastatic potential and mortality. This study evaluates a combined surgical approach for a giant choroidal melanoma.

Methods: A 53-year-old female patient presented in December 2023 with a two-month history of a left intraocular mass. Examination (including ultrasonography and magnetic resonance imaging) revealed localized thickening in the temporal globe, suggestive of choroidal melanoma. The tumor (approximately 10 mm x 10 mm, encapsulated) was completely removed using a combined lamellar scleral incision and endoscopic vitrectomy.

Results: Histopathology confirmed choroidal melanoma. At two months postoperatively, best-corrected visual acuity was 1.0, indicating successful tumor removal with vision preservation.

Conclusions: This combined lamellar scleral incision and endoscopic vitrectomy approach proved effective for removing a giant choroidal melanoma while maximizing visual preservation. Compared to traditional methods with limitations such as significant trauma and incomplete tumor removal, this minimally invasive technique ensured tumor clearance with retinal integrity, offering a promising new surgical strategy.

Abstract No.: 201362
Combined Retinal Detachments (CRD) in Advanced Proliferative Diabetic Retinopathy (PDR) – Tough Scenarios – Understanding and Approach Made Easy!!

*First Author: Chaitra **JAYADEV***
*Co-Author(s): Santosh Gopi Krishna **GADDE***

Purpose: Advanced PDR-associated CRDs represent extreme forms of diabetic retinopathy. The surgical management of

these cases is extremely challenging. A proper understanding of the condition helps in successful management.

Methods: We describe through this surgical video the practical difficulties in such cases of CRDs with a depiction of possible problem areas and how we went around dealing with these difficulties. The importance of the right plane, hierarchical dissection, ensuring a bloodless field and use of chandelier and perfluorocarbon liquid–assisted bimanual surgery in extreme cases versus a conventional vitrectomy cutter and endoillumination is also discussed. This surgical video intends to convey our experience of a successful approach in such cases.

Results: A CRD with rhegma in a tractional retinal detachment adds to the complexity, as the detached retina offers no countertraction with a high probability of inadequate membrane dissection and a downward spiral of events leading to eventual failure of the surgery. Though the approach to such complex cases is highly individualized and experience-based, the willingness to adapt to tricky evolving situations intraoperatively determines the surgical outcome and success.

Conclusions: Advanced PDR-associated CRDs represent extreme forms of diabetic retinopathy. The surgical management of these cases is extremely challenging as they present with varying attachments of fibrovascular proliferation and posterior hyaloid face separations. A mental map of these connections and a proper approach in membrane dissection is essential in achieving a successful surgical outcome. This surgical video is an attempt to demonstrate the author's approach to overcoming these difficulties.

Abstract No.: 200583
Double Trouble in Branch Retinal Vein Occlusion (BRVO): Tackled With Subretinal Tissue Plasminogen Activator (tPA)

First Author: Raja ***NARAYANAN***
Co-Author(s): Tharuni ***CHOWDARY***

Purpose: BRVO is a common retinal vascular disorder that can lead to various sight-threatening complications. Among these, tractional retinal detachment (TRD) and submacular hemorrhage (SMH) represent the two most challenging to manage. We present a rare and complex case of BRVO complicated by both TRD and SMH.

Methods: This case involves a patient with a SMH secondary to BRVO and TRD. Optical coherence tomography (OCT) revealed subretinal hemorrhage and significant fluid, indicating traction. The surgical steps included pars plana vitrectomy (PPV), internal limiting membrane (ILM) peeling, and subretinal tPA injection via a 38-gauge cannula to liquefy the hemorrhage. A fluid-air exchange, endolaser, and 18% SF□ gas tamponade were performed. Postoperative face-down positioning was instructed to displace hemorrhage from the fovea and support retinal reattachment, ultimately aiming to improve vision despite initial severe damage.

Results: The best-corrected visual acuity (BCVA) at presentation was counting fingers at one meter (CF@1 m). At the two-week postoperative visit, his visual acuity improved to 20/100. Examination revealed an attached retina with complete resolution of SMH with minimal subretinal fluid on OCT.

Conclusions: In cases of BRVO complicated by both TRD and SMH, timely surgical intervention with PPV combined with subretinal tPA injection and ILM peeling can lead to significant anatomical and visual improvement. This case highlights the importance of a tailored surgical approach in managing complex BRVO presentations, achieving favorable functional and anatomical outcomes.

Abstract No.: 200653
Double Trouble!

First Author: Kshitij ***RAIZADA***

Purpose: This video is a couplet of two cases presenting with bilateral catastrophes. The first patient is a case of bilateral endogenous endophthalmitis following acute pyelonephritis. The video showcases simultaneous bilateral pars plana vitrectomy (PPV) to treat the patient. The second patient is that of bilateral rhegmatogenous retinal detachment (RRD), following acute retinal necrosis. The video highlights the surgical management of bilateral RRD in a sieve-like retina with multiple holes.

Methods: A 76-year-old female presented to us with complaints of diminution of vision in both eyes for the past 10 days. Her best-corrected visual acuity (BCVA) was positive for light perception with inaccurate projection of rays (PR) in both eyes. She was a known case of pyogenic nephritis. We diagnosed her with bilateral endogenous endophthalmitis. We took her up for simultaneous bilateral PPV and intravitreal antibiotics under a very guarded visual prognosis. The second case involved a 79-year-old female with complaints of diminution of vision in both eyes for the past month. Her BCVA was PR accurate in both eyes. A provisional diagnosis of bilateral acute retinal necrosis with RRD was made. The patient was advised PPV, internal limiting membrane peeling, fluid-air exchange, endolaser, and Spectralis Optical Imaging (SOI) in both eyes.

Results: In the first patient, the right eye had a BCVA of counting finger at four meters, while the left eye could not be salvaged. The second patient achieved a BCVA of counting finger at one meter in both eyes.

Conclusions: Both cases are rare manifestations, and this video entails the herculean task of providing the best possible outcome to the patient in such rare scenarios.

Abstract No.: 200753
Dousing the Subretinal Volcano of Blood With Tissue Plasminogen Activator (TPA)

First Author: Kshitij ***RAIZADA***

Purpose: This surgical video highlights the management of a large subretinal hematoma with subretinal TPA.

Methods: A 19-year-old male came to us with complaints of a diminution of vision in the left eye for the past four days. He had a history of blunt trauma to the left eye. On examination, his best-corrected visual acuity in the left eye was hand movements close to the face with light perception positive and projection of rays accurate. Anterior segment was unremarkable, while on posterior segment evaluation, massive subretinal hemorrhage was seen. The thickness of the subretinal hemorrhage was more than 1000 µm on optical coherence tomography (OCT). There was a macular hole evident on OCT. The patient was taken up for a vitrectomy. After anterior and core vitrectomy, posterior vitreous detachment was completed. Subretinal TPA was injected using a 38-gauge cannula. Upon injection, subretinal hemorrhage started oozing from the macular hole. After TPA Injection, internal limiting membrane peeling (inverted flap technique) was done, and fluid-air exchange was followed by SF6 gas Injection. The patient was advised to undergo prone positioning.

Results: Two weeks following surgery, the patient recovered to 6/9 N6. Subretinal hemorrhage had been absorbed. There was a choroidal rupture present juxta-foveally, causing a paracentral scotoma; however, it did not affect the patient's day-to-day activities.

Conclusions: Subretinal TPA helps in the effective clearance of subretinal hematoma. Timely intervention in such cases can yield good visual outcomes.

Abstract No.: 200856
Endophthalmitis Is Not Always An End!
*First Author: Shaileen **PARIKH***

Purpose: Endophthalmitis is always a challenging situation for surgeon, and results are unpredictable. The video shows a few tricks and tips in endophthalmitis surgery,

Methods: All complicated endophthalmitis surgeries are performed with 23-gauge or 25-gauge instruments. Various methods and tips are suggested for complicated surgeries.

Results: Complicated cases can be managed well, which can enhance visual acuity.

Conclusions: Endophthalmitis cases can be managed well with early vitreoretinal surgery, and vision can be saved.

Abstract No.: 200523
Endoscopic Removal of Plastic Intraocular Foreign Body (IOFB) Concealed Behind the Iris
*First Author: Vivek **DAVE***
*Co-Author(s): Manoj **SHETTIGAR***

Purpose: To present a case demonstrating the diagnostic and therapeutic utility of endoscopic-assisted pars plana vitrectomy in managing a retained IOFB in a pediatric patient with compromised corneal visibility following penetrating eye trauma.

Methods: An eight-year-old male child presented with the inability to open his right eye after an accidental bottle cap injury and prior corneal tear repair. Ocular examination revealed a limbus-to-limbus repaired corneal tear, an irregular shallow anterior chamber, and no retinal view. B-scan ultrasonography suggested an IOFB. The patient underwent pars plana vitrectomy with endoscopic assistance under general anesthesia. During the procedure, 23-gauge sclerotomies were made, and a pars plana lensectomy was performed. An intraocular endoscope was used to visualize the ocular structures and identify the foreign body.

Results: The intraocular endoscope successfully revealed an attached retina and located a hard plastic foreign body behind the iris in the inferonasal quadrant. The IOFB was meticulously freed from vitreous adhesions and explanted through a superior scleral tunnel using forceps. Sclerotomies were then sutured. Postoperatively, topical medications were initiated. At six-month follow-up, the child's visual acuity in the right eye improved to 20/60 with a PROSE contact lens, with the retina remaining attached.

Conclusions: Endoscope has a definite value in diagnosing and treating penetrating eye trauma with poor corneal visibility.

Abstract No.: 201129
Endoscopy-Guided Tube Shunt Insertion in a Patient With Microspherophakia
*First Author: Jocelyn **SO***
*Co-Author(s): Jayson **SO***

Purpose: To present a case of a 25-year-old female presenting with uncontrolled secondary angle closure glaucoma who underwent endoscopy-guided tube shunt insertion.

Methods: A video presentation.

Results: The patient is a known case of microspherophakia in both eyes, anterior staphyloma in the right eye, and adherent leukoma in both eyes since childhood and came in to our institution for uncontrolled intraocular pressure (IOP). On physical examination, the pertinent findings include a visual acuity of counting fingers at three feet for the right eye and hand movements with fair light projection in the left eye; elevated IOP of 56 mmHg in the left eye; anterior staphyloma and decematocoele in the right eye; a cornea measuring 11 mm in largest diameter, adherent corneal leukoma, flat chamber, a nondilating pupil of 2 mm in size, with atrophic holes on the iris and a white cataract posteriorly in the left eye and; no view of the fundus. B-scan showed an attached retina and axial lengths of 26 mm in the right eye and 27 mm in the left. Assessment was secondary angle closure glaucoma, microspherophakia, and descematocoele in both eyes; anterior staphyloma in the right eye; and pathologic

myopia in both eyes. The patient underwent endoscopic pars plana vitrectomy, endoscope-guided tube shunt insertion, and endoscopic cyclophotocoagulation on the left eye. Day 1 postoperatively, the patient had a suprachoroidal hemorrhage on the superotemporal area noted on B-scan. Visual acuity remained, and IOP was 19.9 mmHg. Oral steroids were given, but IOP increased to 62. The patient underwent tube shunt repositioning, and IOP was controlled, ranging from 18 to 22, with no anti-glaucoma medications. Visual acuity remained.

Conclusions: Endoscopic-guided tube shunt insertion via pars plana is effective in controlling IOP for patients with no view anteriorly and posteriorly.

Abstract No.: 200223
Expanding the Indications of Foveal-Sparing Internal Limiting Membrane (ILM) Peeling

*First Author: Deependra **SINGH***
*Co-Author(s): Awaneesh **UPADHYAY**, Shishir **VERGHESE***

Purpose: Foveal-sparing ILM peeling has traditionally been reserved for select conditions, such as myopic foveoschisis, optic disc pit maculopathy, and vitreomacular traction (VMT) syndrome, to preserve central foveal architecture. In this video, we explore the expanding scope of this technique across broader vitreoretinal pathologies, including rhegmatogenous retinal detachment (RRD), proliferative diabetic retinopathy (PDR), and epiretinal membranes (ERM).

Methods: Through a series of illustrative cases, we highlighted both conventional and novel applications of the foveal-sparing ILM peel. The technique was performed in: 1) PDR with macular involvement, 2) VMT with foveal distortion, 3) ERM with central retinal thinning, and 4) macula-involving RRDs. Additionally, we demonstrated the use of perfluorocarbon liquid (PFCL) to aid foveal-sparing peel execution, enhancing precision and minimizing risk.

Results: The foveal-sparing technique was safely and successfully performed in all cases. There were no instances of iatrogenic macular hole formation, foveal deroofing, or intraoperative foveal hemorrhage.

Conclusions: Foveal-sparing ILM peeling is a valuable modification of traditional ILM peeling, extending its utility beyond conventional indications. Its application in PDR, VMT, ERM, and RRD offers a safer approach to central macular handling, potentially enhancing visual outcomes by preserving foveal integrity. As this technique continues to evolve, it promises to reshape our surgical strategy for complex macular cases.

Abstract No.: 201315
Forever and a Day

*First Author: Harsh **JAIN***
*Co-Author(s): Mounika **BOLISETTY**, Aditya **KELKAR***

Purpose: Recurrent retinal detachments accompanied by large macular holes are a surgical challenge for any vitreoretinal surgeon.

Methods: This video showcases captivating and interesting stories of complex, recurrent retinal detachments accompanied by large macular holes. It highlights the crafty use of autologous retinal and amniotic membrane grafts.

Results: Through detailed case studies, this video exhibits the challenges and the conquests in modern retinal surgery, emphasizing the impact of these innovative choices.

Conclusions: Recurrent retinal detachments accompanied by large macular holes are a surgical challenge for any vitreoretinal surgeon, and closure of such massive holes with retinal detachment is of utmost importance for the visual rehabilitation and to avoid recurrence.

Abstract No.: 201090
Foveal Neovascular Tuft in Proliferative Diabetic Retinopathy (PDR): A Precision Vitrectomy Approach

First Author: Zakia ***ANWER***
Co-Author(s): Deependra ***SINGH****, Awaneesh* ***UPADHYAY***

Purpose: To present a rare and surgically challenging case of foveal neovascularization in PDR, complicated by vitreous and subhyaloid hemorrhage originating directly from a foveal neovascular tuft, managed with targeted microdissection.

Methods: A 56-year-old diabetic female with PDR and active neovascularization elsewhere (NVE) presented with sudden visual loss in the left eye. Baseline vision was counting fingers at one meter. Optical coherence tomography (OCT) revealed dense subhyaloid hemorrhage arising from a foveal neovascular tuft. Five days before surgery, an intravitreal anti–vascular endothelial growth factor injection was administered. A 25-gauge pars plana vitrectomy was planned. Following core vitrectomy, the posterior hyaloid was stained with triamcinolone and safely detached and peripheral vitrectomy was achieved. Subhyaloid hemorrhage was aspirated using an extrusion cannula. Brilliant Blue G (BBG)–assisted internal limiting membrane (ILM) peeling was performed around the foveal tuft, exposing the neovascular stalk. The stump of the NVE was then carefully mobilized using ILM forceps and excised with the cutter under direct visualization. A 360-degree endolaser was applied, followed by fluid-air exchange and SF gas tamponade to reduce the risk of postoperative hemorrhage.

Results: Postoperatively, the retina was clear with complete removal of the neovascular tuft and preservation of foveal contour. Visual acuity improved significantly from counting finger at one meter to 6/24. No recurrence of haemorrhage or iatrogenic macular damage was observed.

Conclusions: Foveal NVE is exceedingly rare and surgically demanding. Dye-assisted ILM peeling, followed by controlled mobilization and excision of the tuft, offers a safe and effective strategy for central NVE in PDR.

Abstract No.: 201280
From Pole to Pole: Simultaneous Penetrating Keratoplasty (PKP) and Pars Plana Vitrectomy (PPV) for Pseudophakic Bullous Keratopathy With Posteriorly Dislocated Intraocular Lens (IOL)

First Author: Rochele ***PILONES***
Co-Author(s): Aliana Christel ***VERA CRUZ***

Purpose: To highlight key surgical techniques for combined PKP, PPV, IOL explantation, and scleral-fixated IOL implantation in a case of bullous keratopathy with a posteriorly dislocated IOL.

Methods: A 56-year-old male with blunt ocular trauma 40 years prior presented with bullous keratopathy and a dropped IOL. A combined anterior and posterior segment approach under general anesthesia was planned. An adequately sized Flieringa ring was secured to facilitate placement of 23-gauge trocars, positioned 2.5-3.5 mm from the limbus. Early core vitrectomy allowed safe perfluorocarbon-assisted IOL retrieval. A partial trephination technique with an 8.0-mm suction trephine was used to maintain anterior chamber stability. A 6-mm full-thickness trephination was performed superiorly to permit removal of the rigid single-piece IOL via the handshake technique. An Akreos AO IOL was fixated using Gore-Tex sutures through sclerotomies 2.5 mm posterior to the limbus. The procedure concluded with full trephination and suturing of an 8.5-mm donor corneal graft using interrupted 10-0 nylon sutures.

Results: The procedure was completed without complications. The IOL remained stable and well centered, with a clear corneal graft on follow-up. No retinal or graft-related issues were observed.

Conclusions: Combined PKP and PPV can be safely performed in a single session, provided that the degree of corneal opacity still allows adequate view of the anterior and posterior segments. This video emphasizes step-by-step

strategies to enhance surgical safety, ensure IOL stability, and promote graft clarity.

Abstract No.: 200305
High Impact, Low Cost: Revolutionizing Vitreoretinal Surgery Training With Innovative Simulators

*First Author: Shishir **VERGHESE***
*Co-Author(s): Pranshu **GOEL**, Jayant **KUMAR**, Veer **SINGH***

Purpose: To introduce innovative, low-cost training tools aimed at enhancing hand-eye coordination, depth perception, and dexterity in novice vitreo-retina surgeons during the early phase of their surgical training.

Methods: A stepwise demonstration is provided for constructing a basic surgical simulator using a suction machine and used vitrectomy cutters. Additionally, a simple model for practicing intravitreal injections is created using commonly available plastic materials and internal limiting membrane peeling practice using onion peel and bleaching solution. The models are designed to be easily assembled and replicated in low-resource settings.

Results: The models offer a practical and accessible way to simulate key surgical maneuvers. Regular practice with these tools improves precision, reduces tremors, and enhances the spatial awareness of trainees. The simplicity and affordability of these models encourage their widespread use in training centers.

Conclusions: These cost-effective, do-it-yourself simulation tools provide valuable early-stage practice for vitreoretinal surgeons. Incorporating them into training programs can help reduce complications, boost trainee confidence, and improve surgical outcomes during the formative stages of learning.

Abstract No.: 200643
Hole in a Black Hole

*First Author: Abhinav **SINHA***
*Co-Author(s): Bibhuti P. **KASHYAP**, Pallavi **PRIYA***

Purpose: To demonstrate the surgical management and visual rehabilitation of a rare case of a freshly formed macular hole, obscured within a healed hyperpigmented choroiditis scar, highlighting the diagnostic challenges, surgical nuances, and postoperative outcomes.

Methods: Optical coherence tomography was performed to diagnose the macular hole. A three-port pars plana vitrectomy was performed, with double internal limiting membrane flap tuck with a gas tamponade under local anesthesia. Follow-up was done with postoperative visual acuity, fundus picture, and optical coherence tomography.

Results: Macular hole closure with neurosensory reattachment was achieved. Visual acuity improved significantly to previous baseline level.

Conclusions: A sudden reduction in vision, in the context of an existing healed macular scar, does not always indicate reactivation. A fresh macular hole can rarely form in such scars. Due to the relative sparing of photoreceptors, anatomical closure of these holes, though difficult, can yield good functional recovery if achieved.

Abstract No.: 200199
Hole-y Fix! Exploring Internal Limiting Membrane (ILM) Flaps, Graft and Amniotic Membrane Graft (AMG) for Macular Hole Repair

*First Author: Mohan **RAJAN***
*Co-Author(s): Prakadesewaran **K**, Arthi **M***

Purpose: The purpose of this video is to demonstrate the effectiveness of ILM flap, graft, and AMGs in the management of large and recurrent macular holes.

Methods: This surgical video highlights three distinct approaches to inverted ILM flaps, free ILM graft and AMGs. After a three-port

pars plana vitrectomy, one of the following approaches is followed: inverted ILM flap – a hinged flap of ILM from temporal or superior quadrant in placed over the macular hole; free ILM graft – an ILM graft is harvested from a peripheral site and placed over the hole; and AMGs – a trimmed segment of human AMG is used to scaffold the macular hole.

Results: The inverted ILM flap covers the hole, promoting glial proliferation and closure. When a flap is not feasible in the case of resurgeries, an ILM-free graft provides structural support and facilitates cell migration. The AMG is a biocompatible scaffold with anti-inflammatory and neurotrophic properties, serving as an effective alternative for refractory macular holes.

Conclusions: By adapting these advanced surgical manoeuvres, we can ensure anatomical and functional success in patients with recurrent and refractory macular holes.

Abstract No.: 200443
In And Out – A Novel Method for Intraocular Foreign Body (IOFB) removal

*First Author: Nivean **MADHIVANAN***
*Co-Author(s): Sridhar **BARATAN**, Mohan **RAJAN**, Siva Mohan **REDDY***

Purpose: The video demonstrates the astute surgical technique used to handle a case of IOFB removal.

Methods: A 26-year-old man presented to the outpatient department with a workplace injury involving a metallic substance in his right eye (RE). On examination, the RE had a clear cornea and lens, with a scleral tear 4 mm from the nasal limbus, a sharp metallic foreign body (FB) in the mid vitreous cavity, and a retinal tear corresponding to the entry wound. A 23-gauge pars plana vitrectomy assisted with IOFB removal was performed on the same day. After trimming the prolapsed vitreous, the entry wound was left open. Following adequate core vitrectomy, the FB was grasped and transferred hand-to-hand within the vitreous cavity before being delivered through the intentionally left open entry wound. The entry wound was then sutured. After inducing posterior vitreous detachment, peripheral vitrectomy was performed, and barrage laser was applied to the retinal tear. Fluid-gas exchange was conducted, and the vitreous cavity was filled with 14% SF6.

Results: One week postoperatively, the patient had a vision of 6/24 with a gas-filled vitreous cavity. One month postoperatively, the unaided vision was 6/6, with a quiet anterior segment, clear lens, and normal optical coherence tomography.

Conclusions: With timely intervention, state of the art equipments and insightful improvisation, it is possible to ensure good visual outcome in such challenging cases of IOFB. The use of protective goggles also should be emphasized as part of health awareness.

Abstract No.: 201091
Internal Limiting Membrane (ILM) Flap–Assisted Repair of Iatrogenic Foveal Dehiscence With Subfoveal Perfluorocarbon Liquid (PFCL) Migration During Diabetic Tractional Retinal Detachment (TRD) Surgery: A Targeted Approach for Anatomical Rescue and Visual Recovery

*First Author: Deependra **SINGH***
*Co-Author(s): Awaneesh **UPADHYAY***

Purpose: To report the successful anatomical and functional outcome of an ILM flap technique for iatrogenic foveal dehiscence with subfoveal PFCL during surgery for diabetic TRD.

Methods: A 52-year-old male with parafoveal TRD underwent 25-gauge pars plana vitrectomy. After nasal fibrovascular proliferation (FVP) removal, the temporal membranes were approached unimanually. Due to dense adherence and macular traction, PFCL was injected to stabilize the posterior pole. However, a sudden jet — likely from a corked syringe — caused unintended subretinal PFCL migration via foveal dehiscence. Controlled PFCL injection was resumed to maintain retinal stability. Temporal FVP was then dissected using max-grip forceps and trimmed with the

cutter. To evacuate the subfoveal PFCL bubble, multiple temporal macular retinotomies were created under PFCL. Direct aspiration was performed, allowing targeted evacuation of the high-surface-tension PFCL bubble. ILM peeling was done and placed over the fovea as a scaffold over the foveal defect. Endolaser photocoagulation was applied, and silicone oil was used as endotamponade.

Results: Postoperative imaging confirmed complete retinal reattachment with no residual subretinal PFCL. Optical coherence tomography showed a hyperreflective ILM flap sealing the foveal defect. Preretinal hemorrhage resolved and the flap remained stable. At two-month follow-up, best-corrected visual acuity improved to 6/24 under oil.

Conclusions: Iatrogenic foveal dehiscence during FVP dissection can result in subfoveal PFCL entrapment, posing a significant surgical challenge. Macular retinotomies enable targeted evacuation of high-surface-tension PFCL bubbles. ILM flap provides a stable scaffold for foveal defect closure, along with silicon oil facilitates both anatomical reattachment and functional visual recovery.

Abstract No.: 200867
Intraocular Pressure (IOP) Control During Phacofragmentation: Current-Generation Versus Next-Generation Surgical System

*First Author: Vara **WUYYURU***
*Co-Author(s): Martin **CHARLES**, Brian **MCDONELL**, Ying **ZHU***

Purpose: To compare the IOP control performance between the Constellation Vision System and the Unity Vitreoretinal Cataract System (VCS) during post-occlusion break when performing pars plana fragmentation in a simulated bench model.

Methods: A Bioniko model eye filled with balanced salt solution (BSS) was used with three 25-gauge (G) valved cannulas and chandelier illumination in a surgical simulation. Fragmentation was simulated for two platforms: Constellation with 20G fragmentation (vacuum control, 100 mmHg) and Unity VCS with 22G Ozil fragmentation (flow control, 20 cc/min, 150 mmHg). Initial IOP was adjusted to 26 mmHg. Ultrasound was not activated; only aspiration was used to assess post-occlusion break. A silicone ball occluded the fragmentation tip during high aspiration to simulate occlusion, then was manually released to simulate post-occlusion break. IOP was continuously monitored via an IOP sensor integrated in the infusion line.

Results: During high flow fragmentation aspiration, the mean IOP was 6.27 ± 0.66 mmHg with Constellation, and 31.86 ± 0.60 mmHg with Unity VCS. During occlusion, IOP initially spiked before stabilizing at an average of 25.65 ± 0.16 mmHg with Constellation and 26.14 ± 0.50 with Unity VCS. Following occlusion break, when the silicone ball was released, IOP dropped more significantly with Constellation than with Unity VCS.

Conclusions: The Unity VCS with 22G fragmentation maintained IOP more effectively with fewer prolonged low IOP episodes, compared to Constellation with 20G fragmentation. This is particularly beneficial for surgeries requiring high aspiration flow. The smaller 22G fragmentation handpiece supports a less invasive approach, promoting quicker recovery, and reduces suture dependency compared to the 20GA.

Abstract No.: 201043
Inverted Internal Limiting Membrane (ILM) Flap Technique for Optic Disc Pit Maculopathy

*First Author: Shobhit **CHAWLA***
*Co-Author(s): Lubna **AHMAD***

Purpose: To demonstrate a surgical approach using an inverted ILM flap to treat optic disc pit maculopathy and improve visual outcomes.

Methods: A 24-year-old with recent visual loss underwent 25-gauge vitrectomy, ILM peel with nasal-hinged flap inversion over the optic pit, followed by gas tamponade.

Results: Postoperative optical coherence tomography showed resolution of fluid and flap

covering the pit. Visual acuity improved from 6/60 to 6/18 at six weeks.

Conclusions: Early surgery in recent-onset optic disc pit maculopathy is promising. The inverted ILM flap technique effectively closes the pit and restores vision.

Abstract No.: 200337
Juxtamacular Fibrovascular Proliferative Membrane (FVPM) in Proliferative Diabetic Retinopathy (PDR): Surgical Considerations and Outcomes

*First Author: Afroz **PATEL***
*Co-Author(s): Jaydeep **WALINJKAR***

Purpose: To highlight the surgical considerations and outcomes in the management of a macula-threatening juxtamacular FVPM in a patient with PDR, and to discuss the role of early intervention in preventing tractional retinal detachment (TRD).

Methods: Pars plana vitrectomy was performed in a patient with PDR, who presented with a dense epiretinal membrane and focal macular traction caused by juxtamacular FVPM. Surgical decision-making incorporated the status and visual acuity of the fellow eye. Careful dissection of the adherent membrane was carried out using flexible instrumentation to minimize the risk of iatrogenic breaks and intraoperative hemorrhage.

Results: The surgery was successfully completed with complete removal of the fibrovascular membrane and relief of traction over the macula. Postoperatively, the retina remained attached with significant anatomical and functional improvement. Visual acuity improved from 6/36 to 6/18.

Conclusions: Early vitrectomy in cases of juxtamacular FVPM at risk of causing macular traction offers favorable anatomical and visual outcomes. Small-gauge vitrectomy provides enhanced maneuverability, reduces surgical trauma, and allows safer dissection in complex fibrovascular proliferations. The status of the fellow eye and potential for progression to TRD should be key factors in surgical timing and planning.

Abstract No.: 201262
Live Rescue of Intravitreal Gnathostoma – A Novel Technique for Exorcising the Worm

*First Author: Kim **RAMASAMY***
*Co-Author(s): Naresh **BABU KANNAN**, Shreyas **GORE**, Muthu Krishnan **VALLINAYAGAM***

Purpose: To demonstrate in toto live extraction of intravitreal gnathostoma and familiarize a novel surgical technique for accurate histopathological diagnosis.

Methods: A 47-year-old farmer presented with blurring and floaters in left eye for a week. There was minimal anterior chamber reaction and a live intravitreal parasite associated with few retinal haemorrhages. 25-gauge pars plana ports were made, and a limited core vitrectomy was performed, followed by a peritomy. A 20-gauge full-thickness sclerotomy was created, and the tip of a silicone tube was cut obliquely and inserted through the sclerotomy. The external part of the needle was attached to the viscous fluid extraction tubing for the vitrectomy machine. Gentle aspiration pulled the worm into the extractor. The parasite was submitted for parasitological evaluation, proving Gnathostoma spinigerum species. Silicone oil was injected after performing endolaser to preexisting retinal breaks.

Results: This novel surgical technique allows for the aspiration of an intravitreal nematode in a controlled manner causing zero structural damage. This technique facilitates species identification of the parasite.

Conclusions: Intravitreal nematodes can be extracted in a controlled manner with structural damage. This technique enables live in toto extraction and species identification, facilitating appropriate therapy.

Abstract No.: 201374
Locked In: Four-Point Transscleral Fixated Intraocualr Lens (IOL) Technique

*First Author: Roberto **FRANCO***
*Co-Author(s): Cesar Emmanuel **GLIPO**, Daniel Jose **MENDOZA**, Timothy **TANG LEE SAY***

Purpose: To present a four-point transscleral fixation technique for secondary IOL to

highlight its indications, outcomes, and advantages.

Methods: A case presentation of a patient with dislocated IOL, right eye managed with surgical intervention using the four-point fixation technique for secondary transscleral IOL fixation.

Results: Four-point transscleral suture (TSS) fixation was done in this case with no complications intraoperatively and was tolerated well by the patient. Upon follow-up at one month, best-corrected visual acuity (BCVA) of 20/30 was noted with patients' satisfaction upon removal of sutures. The postoperative period was unremarkable as well.

Conclusions: The four-point fixation technique is an effective technique to manage cases of dislocated IOL with no viable sulcus or bag. This technique can prove lengthy and challenging in terms of centering and stabilization. However, this can also minimize some complications, such as dropping the secondary IOL as it is threaded and prepared before insertion, versus other techniques. Outcomes prove favorable as per the case report on patient follow-up, reporting a BCVA of 20/30 at one month.

Abstract No.: 201302
Macular Buckle, Do-It-Yourself to Customized Solution for Myopic Traction Maculopathy (MTM)...

*First Author: Naren **SHETTY***
*Co-Author(s): Nagesha **C.K**, Vedant **GAMBHIR**, Naresh Kumar **YADAV***

Purpose: To demonstrate the utility of do-it-yourself macular buckle and customized buckle in various complex MTM cases. The surgical technique and nuances of its potential as an adjunct have been demonstrated in the video.

Methods: A case of recurrent macular hole detachment in a high myopic eye was managed with combined macular buckle and vitrectomy. The assembled type do-it-yourself buckle was prepared using a silicone sponge and a titanium plate. The second case was staphyloma-confined macular detachment. Customized buckle was used alone to address the detachment. Intraoperative optical coherence tomography (OCT) was used for precision placement and the amount of indentation. Postoperative OCT was done to evaluate its effectiveness.

Results: Both cases showed the correct placement of the buckle and good indentation. The hole was closed with the settlement of retina in the first case, whereas the detachment settled in the second case. None had developed any long-term complications over one-year follow-up.

Conclusions: Macular buckling is good solo solution for selected cases whereas it can be good adjunct in combined cases resulting in favorable outcomes as demonstrated in the video.

Abstract No.: 201159
Macular Hole Closure Using a Retracting Door Technique

*First Author: Nauman **HASHMANI***

Purpose: To present the retracting door technique for managing a large full-thickness macular hole.

Methods: A 45-year-old patient with a full-thickness macular hole and a preoperative best-corrected visual acuity (BCVA) of 6/36 underwent surgery using the retracting door technique. Preoperative optical coherence tomography (OCT) showed a minimum linear diameter of 714 microns, a base diameter of 1500 microns, and a macular hole index of 0.34. A hinged internal limiting membrane (ILM) flap was created and retracted centripetally over the fovea. Fluid-air exchange was followed by 20% SF6 gas tamponade.

Results: At one-week follow-up, BCVA improved to 6/24 with OCT confirming initial flap positioning. By one month, vision further improved to 6/9 with complete Type 1 macular hole closure and restoration of foveal contour. The ILM flap remained well-centered without displacement. No intraoperative or postoperative complications were noted.

Conclusions: The retracting door technique may offer an effective approach for treating large macular holes. The dynamic centration mechanism of the ILM flap appears to promote anatomical closure and visual improvement in challenging cases.

Abstract No.: 200974
Management of Combined Retinal Detachment in Retinal Angioma

*First Author: Apoorva **AYACHIT***
*Co-Author(s): Shadma **EQBAL***

Purpose: To describe the medical management, surgical approach, intraoperative techniques, and outcomes in the case of combined retinal detachment in retinal capillary angioma.

Methods: Firstly, the case was managed by conservative approach. Intravitreal triamcinolone acetonide was injected to reduce the exudation with a plan of cryotherapy to the tumor. Due to paradoxical increase in exudation, a second dose of intravitreal triamcinolone acetonide was given. As there was increased traction noted, surgical management was planned. We supported the retina externally with a buckle, and subretinal fluid (SRF) was drained externally. Pars plana vitrectomy was done with a 25-gauge cutter and in a 3D visualisation system (Ngenuity). Meticulous membrane dissection was carried out, and long-duration laser burns were given to the feeding vessels. Fluid-air exchange was done, and silicone oil was injected as a tamponading agent.

Results: We have achieved good visual (6/36, N36) and anatomical outcomes at one month postoperative.

Conclusions: Combined retinal detachment in retinal angioma is surgically challenging. A customized approach with careful membrane dissection, supporting retina externally with a buckle and draining SRF externally, has led to good visual and anatomical outcomes. By not performing surgical excision of the tumor, we were able to reduce surgical trauma and potentially lower the risk of proliferative vitreoretinopathy.

Abstract No.: 200894
Management of Subretinal Cysticercosis in One-Eyed Patient

*First Author: Shilpa **SABU***
*Co-Author(s): Mohit **DOGRA**, Ramandeep **SINGH**, Basavaraj **TIGARI***

Purpose: To present the management and surgical excision of a rare case of subretinal cysticercosis in a one-eyed patient, achieved through pars plana vitrectomy, highlighting the surgical technique and clinical outcomes.

Methods: This case described a detailed ophthalmologic surgical procedure for removing a subretinal cysticercus in a patient with a history of neurocysticercosis. A 35-year-old male with a history of seizures and previous neuro-imaging showing multiple intracranial calcified cysticerci. The right eye showed the presence of a subretinal cysticercus in the superonasal quadrant, along with a few flame-shaped hemorrhages and 360-degree occluded vessels. After obtaining written and informed consent, under local anesthesia, a 25-gauge pars plana vitrectomy was carried out. A small retinotomy was made near the cyst to access the subretinal space. The cysticercus was carefully mobilized and extruded into the vitreous cavity without rupturing the sac to prevent an inflammatory response. Due to 360-degree occlusion of retinal vessels, scatter laser photocoagulation was applied. The surgery was finalized with complete vitreous base dissection and SF6 20% gas tamponade to support retinal reattachment and healing.

Results: Successful complete removal of the subretinal cysticercus was achieved using this simple surgical approach, resulting in restoration of good visual acuity in the patient.

Conclusions: In conclusion, the absence of viable cysts in the affected eye, fellow eye and central nervous system, there is no need for further systemic treatment. Advances in viewing systems, instrumentation, and vitrectomy technology have significantly simplified these complex surgical procedures.

Abstract No.: 200217
Managing Retinal Detachment (RD) With Choroidal Detachment (CD) in a Case With Boston Type 2 Keratoprosthesis

*First Author: Mohan **RAJAN***
*Co-Author(s): Geetha **IYER**, Arthi **M**, Bhaskar **SRINIVASAN***

Purpose: To demonstrate the surgical approach and intraoperative challenges in managing a complex case of RD with CD in a patient with type 2 keratoprosthesis.

Methods: A 55-year-old female presented to us with a diminution in vision in the left eye. She was a known case of ocular cicatricial pemphigoid with a history of multiple failed keratoplasties. Her right eye was phthisical. Her left eye has a Boston type 2 keratoprosthesis, which was placed 3 years ago. She was maintaining a best-corrected visual acuity (BCVA) of 6/9 in her left eye, which gradually diminished over time. Her presenting vision was no light perception in her right eye and light perception in her left eye. There was no view of the fundus. B-scan of the left eye showed open funnel RD with CD in three quadrants, except for the superotemporal quadrant. She was taken up for pars plana vitrectomy with choroidal drainage, membrane peeling, endolaser, and silicone oil injection.

Results: Postoperatively, RD was achieved with the resolution of CD. At three months post-surgery, the retina was reattached with oil in situ, with a BCVA of 6/60.

Conclusions: RD with CD in a patient with type 2 keratoprosthesis poses significant surgical challenges due to altered ocular anatomy and hypotony. Successful management requires meticulous surgical planning, adaptation of standard vitreoretinal techniques, and close postoperative monitoring. This video highlights key surgical steps and strategies to improve outcomes in such complex eyes.

Abstract No.: 201298
Managing a Globe Perforation During Period Bulbar Block

*First Author: Shah Md Rajibul **ISLAM***

Purpose: To showcase the difficulties and methods to manage an iatrogenic globe perforation.

Methods: Phacoemulsification with posterior chamber intraocular lens (PCIOL) was done, followed by pars plana vitrectomy, extracapsular limbal, fluid-air exchange, and silicone oil injection.

Results: Successfully managed case of iatrogenic globe perforation.

Conclusions: It is extremely important to inject peri-bulbar blocks carefully to avoid globe perforation.

Abstract No.: 200469
Minimal Extraocular Surgery for Retinal Detachment

*First Author: Ma.Cecilia **ARENAL***
*Co-Author(s): Roberto Luis **FRANCO**, Daniel Jose **MENDOZA***

Purpose: To present a case of an inferior retinal detachment that was managed by segmental buckle without external drainage of subretinal fluid.

Methods: A 270 degrees of conjunctival peritomy was done. Then a blunt dissection of the pockets were done using a mosquito forceps. Traction sutures were placed for ease of manipulation. The inferotemporal quadrant was inspected for any abnormalities such as thinning, staphylomas, and cracks. The retina was examined 360 degrees after which, the retinal hole was marked and cryopexy was done. Markings were done prior to fixation, mattress suture was preplaced. Then slits on sponge buckle were created for better fixation. The conjunctiva was repaired after which we noted that the tone of the eye was hard, hence we did an anterior chamber paracentesis.

Results: Remarkable settlement of the retina and the absorption of subretinal fluid without

drainage within 24 hours is itself an indicator of the success of surgery.

Conclusions: Minimal extraocular surgery provides an excellent balance of safety, efficacy, and patient comfort. It remains underutilized but should be more broadly adopted where appropriate to optimize retinal detachment management.

Abstract No.: 201205
Navigating Complex Macular Maze With 41-Gauge Compass!!!

*First Author: Guruprasad **AYACHIT***
*Co-Author(s): Apoorva **AYACHIT**, Shrinivas **JOSHI**, Giriraj **VIBHUTE***

Purpose: To exemplify six indications of 41-gauge needles in retinal surgery.

Methods: This small case series is meant to review and exemplify the use of 41-gauge needles to treat six different retinal pathologies. While using 41-gauge needles for submacular hemorrhages may be relatively mainstream, their use in other conditions may not be as intuitive. The series includes a case of large submacular hemorrhage, persistent macular hole, retained subfoveal perfluoro-n-octane (PFO), macular fold, a case of coloboma with retinal detachment, and a case of acute retinal necrosis with localized retinal detachment.

Results: This case series depicts the successful use of 41-gauge needles to treat six various retinal pathologies.

Conclusions: The use of 41-gauge needles may not only be useful in cases of large submacular hemorrhages but may offer significant benefits in treating multiple other retinal conditions.

Abstract No.: 200283
Oil and Perfluorocarbon Liquid (PFCL): The Perfect Pair for Retina – Management of Complex Retinal Detachment (RD) in a Pediatric Patient With Advanced Proliferative Vtreoretinopathy (PVR)

*First Author: Dibya **PRABHA***

Purpose: To describe the surgical management and outcomes of a complex RD with advanced PVR in a pediatric patient using PFCL–silicone oil (SO) exchange.

Methods: A 9-year-old boy from Yemen presented with progressive vision loss in both eyes: one year in the right eye (RE) and two years in the left eye (LE), without any history of trauma or systemic illness. On examination, best-corrected visual acuity (BCVA) was hand motions in the RE and no perception of light in the LE. Intraocular pressure (IOP) was 4 mmHg in the RE and 6 mmHg in the LE. Fundus evaluation revealed a closed-funnel retinal detachment in the RE and a phthisical globe in the LE. The patient underwent pars plana vitrectomy with PFCL tamponade, endolaser photocoagulation, and silicone oil tamponade under general anesthesia.

Results: On the first postoperative day, BCVA improved to counting-fingers-close-to-face with an IOP of 24 mmHg. At one week, BCVA further improved to 20/400, and IOP was 12 mmHg; however, a superior retinal redetachment was observed. The patient underwent a second surgery involving PFCL-SO exchange. At one-month follow-up, BCVA had improved to 20/250, IOP was stable at 10 mmHg, and the retina remained attached.

Conclusions: This case demonstrates the potential efficacy of PFCL-SO exchange in achieving anatomical and functional success in complex pediatric retinal detachment complicated by advanced PVR.

Abstract No.: 200622
Pars Plana Vitrectomy (PPV) and Scleral Fixation of a Dropped Intraocular Lens (IOL) via Yamane Technique

*First Author: Edmin Michael **SANTOS***
*Co-Author(s): Anna Victoria **SAN PEDRO***

Purpose: This video demonstrates a combined approach using PPV and the Yamane technique to retrieve and reposition a dropped three-piece IOL. It highlights that in selected cases, the original IOL can be anteriorized and reused, eliminating the need for lens exchange.

Methods: A 74-year-old male with a history of cataract surgery 40 years prior presented with

a dislocated IOL in the vitreous cavity. A three-port 23-gauge PPV was performed, followed by core and peripheral vitrectomy. Perfluorocarbon liquid was injected to protect the macula. The haptics were sequentially anteriorized after releasing of the incarcerated haptic from the pars plana. Yamane technique was then performed after successful anteriorization of the lens.

Results: Postoperatively, the IOL was well centered with no tilt. Visual acuity improved to 20/55 after resolution of corneal edema. No intraoperative or postoperative complications were noted.

Conclusions: The Yamane technique, when combined with PPV, offers a reliable method for repositioning dropped IOLs. An existing three-piece IOL can be safely reused and fixated without the need for lens exchange, achieving stable anatomical and visual outcomes.

Abstract No.: 201074
Past Forward: Bridging Yesterday's Methods With Today's Tools. Chandelier-Assisted Segmental Buckle With External Drainage and Cryopexy on a 20-Year-Old Marfan Syndrome Patient With Inferior Retinal Detachment

*First Author: Carlo **NASOL***
*Co-Author(s): Roberto Luis **FRANCO**, Daniel Jose **MENDOZA***

Purpose: To demonstrate the successful integration of modern chandelier illumination with a classical scleral buckling technique in the management of inferior rhegmatogenous retinal detachment in a young patient with Marfan syndrome.

Methods: A 20-year-old male with Marfan syndrome with presented with a subluxated lens with an inferior retinal detachment involving a single peripheral break. Instead of doing the more common procedure nowadays which is vitrectomy with or without lensectomy, a segmental scleral buckle with external subretinal fluid drainage and cryopexy of inferior retinal break under wide-angle visualization using chandelier-assisted illumination was done. The hybrid approach allowed for improved intraoperative visualization and precise treatment without vitrectomy.

Results: Anatomical reattachment of the retina was achieved postoperatively with significant improvement in visual acuity. No intraoperative or postoperative complications were noted. The patient remained stable with a fully attached retina and preserved peripheral vitreous architecture at three-month follow-up.

Conclusions: This case underscores the clinical wisdom of favoring a time-tested scleral buckling technique—enhanced with modern chandelier-assisted visualization—in managing retinal detachment in young, phakic patients with connective tissue disorders such as Marfan syndrome. In this scenario, avoiding pars plana vitrectomy minimized the risk of iatrogenic lens damage, cataract formation, and zonular compromise, which are of particular concern in eyes with pre-existing lens subluxation. The "past forward" approach not only preserved the native lens and vitreous architecture but also achieved excellent anatomical and visual outcomes, reinforcing the value of a tailored, complication-conscious strategy over more invasive modern alternatives.

Abstract No.: 200233
Precision Over Pull: Finesse-Based Solutions in Macular Surgery

*First Author: Afroz **PATEL***
*Co-Author(s): Jaydeep **WALINJKAR***

Purpose: To describe a surgical technique for successful surgical management of vitreomacular traction (VMT).

Methods: A case of 71-year-old lady who came to us with a decrease in vision and progressive metamorphopsia in her right eye for six months. Her best-corrected visual acuity (BCVA) was 6/12 (P), N10 and 6/9, N6 in the right and left eyes, respectively. She had a history of macular hole surgery in her left eye six years ago. The right eye showed VMT with cystic spaces. We planned pars plana vitrectomy (PPV), internal

limiting membrane (ILM) peeling, and gas injection.

Results: Six weeks after the surgery, the BCVA in the right eye significantly improved to 6/6 (P), N6. The standard treatment for severe or symptomatic VMT is PPV. The goal of vitreous surgery is to eliminate anteroposterior and tangential traction.

Conclusions: The risk of iatrogenic macular hole formation is high in inexperienced hands while performing vitrectomy and ILM peeling in the case of VMT. Fovea-sparing ILM peeling is recommended. Here we describe a technique for successful surgical management of VMT avoiding iatrogenic macular hole formation.

Abstract No.: 200238
Proliferative Diabetic Retinopathy (PDR) With Table-Top Tractional Retinal Detachment (TTTRD) and Extensive Fibrovascular Proliferation (EFVP): 25-Gauge 1-Inch Magic

*First Author: Sangeet **MITTAL***

Purpose: PDR with TTTRD and EFVP are difficult to manage. Most eyes go blind despite modern instrumentation. To evaluate the safety and efficacy of using a 25-gauge 1-inch needle (25G-1IN) for the dissection of preretinal EFVP in PDR with TTTRD.

Methods: Nineteen patients diagnosed with PDR with TTTRD and EFVP underwent bimanual vitrectomy using 25G-1IN. Four-port 25G pars plana vitrectomy was done, and a chandelier illuminator was fixed in the inferonasal quadrant. Bimanual dissection of EFVP was done using end-gripping forceps in one hand and 25G-1IN in the other. Silicon oil was used as a tamponade in 15 eyes.

Results: At the final follow-up, retina was attached in 18 of 19 eyes. Improvement in visual acuity was seen in 16/19 eyes. Retinal breaks during dissection occurred in 8/19 eyes.

Conclusions: The study suggests that 25G-1IN can be safely used in the dissection of EFVP in patients with PDR with TTTRD, but the risk of retinal breaks should be considered. The risk, however, is not greater than the conventional method of dissection. The limitation of the study is its non-comparative nature.

Abstract No.: 201300
Removal of Intraocular Shotgun Pellet Using a Makeshift Basket

*First Author: Shah Md Rajibul **ISLAM***

Purpose: To remove an intraocular shotgun pellet.

Methods: An irrigating vectis was wrapped with sterile micropore to turn it into a makeshift basket. The shotgun pellet was held with the cutter using only vacuum and lifted up into the interior chamber. The vectis was inserted through a sclero-corneal tunnel. The pellet was dropped into the makeshift basket and externalized.

Results: Successfully managed to remove an intra ocular shotgun pellet using a makeshift basket.

Conclusions: Improvising is a key to innovation that leads to success stories.

Abstract No.: 201145
Rescue Strategy for Macular Hole in Diabetic Tractional Retinal Detachment (TRD): A Combined Internal Limiting Membrane (ILM) Scaffold and Amniotic Membrane Plug Approach

*First Author: Awaneesh **UPADHYAY***

Purpose: To demonstrate a surgical rescue technique for full-thickness macular holes (FTMH) encountered during pars plana vitrectomy (PPV) for TRD secondary to proliferative diabetic retinopathy (PDR), using a combination of ILM scaffold and amniotic membrane graft (AMG).

Methods: A 58-year-old male with PDR presented with TRD involving the macula and a coexisting FTMH with vision of counting fingers at one meter. Standard 25-gauge PPV with meticulous membrane dissection was performed along with subretinal fluid aspiration through the macular hole. An ILM flap was fashioned and positioned over the hole as a scaffold under perfluorocarbon liquid (PFCL).

However, during fluid-air exchange, the ILM scaffold was inadvertently aspirated. Pan-retinal photocoagulation and silicone oil tamponade were done. As a salvage strategy, a trimmed AMG was gently inserted over the disc and manoeuvred over the macular hole under silicon oil.

Results: Postoperative optical coherence tomography at one week confirmed type 1 closure of the macular hole with good anatomical contour and complete retinal reattachment. The AMG remained stable without signs of displacement or inflammation. Visual acuity improved to 6/60. No intraoperative or postoperative complications were noted.

Conclusions: Macular holes in the setting of diabetic TRD are uncommon and pose significant surgical challenges. While the use of an ILM flap under PFCL offers a stable scaffold for hole closure, intraoperative loss of the flap can compromise outcomes. In such situations, an AMG serves as an effective rescue strategy, providing predictable outcomes.

Abstract No.: 200494
Rescuing Rapunzel – Surgical Management of Iatrogenic Retinal Incarceration

First Author: Pallavi ***PRIYA***
Co-Author(s): Bibhuti ***P KASHYAP****, Abhinav* ***SINHA***

Purpose: While retinal incarceration is most associated with traumatic injuries, it may also occur as a rare but serious complication of iatrogenic insults during ophthalmic procedures. This video illustrates the successful rescue of incarcerated retina in two distinct cases, each caused by a different ophthalmic subspecialty, through tailored pars plana vitrectomy techniques.

Methods: Two patients with retinal incarceration were managed via pars plana vitrectomy — Case 1: Retinal incarceration near a superior break following scleral perforation during scleral buckling; and Case 2: Paramacular incarceration secondary to scleral perforation during peribulbar anesthesia.

Results: In both cases, anatomical success was achieved with preservation of the posterior pole and no additional iatrogenic damage.

Conclusions: Retinal incarceration, though rare and alarming, can be effectively managed with individualized surgical strategies. Understanding the anatomical context, modulating traction carefully, and delivering precise laser therapy are key to preventing permanent visual loss. Rescuing Rapunzel is both a metaphor and a mission — to untangle and save the retina from unintended harm.

Abstract No.: 200964
Rescuing the Sunken "Moon" – Subretinal Dislocated Lens

First Author: Piyush ***KOHLI***
Co-Author(s): Isha ***ACHARYA***

Purpose: To describe a rare case of a subretinal cataractous lens discovered intraoperatively in a patient with chronic retinal detachment, and to highlight the importance of thorough peripheral retinal evaluation to anticipate surgical challenges.

Methods: A 56yearold male presented with gradual bilateral vision loss over one year. Vision was perception of light with inaccurate projection in the right eye and hand movements in the left eye. The right eye had a total mature cataract with no fundus view, while the left eye was aphakic with tobacco dusting in the vitreous and a total chronic rhegmatogenous retinal detachment. The patient was unaware of any previous ocular surgery or trauma and was extremely uncooperative for an intended peripheral examination. B-scan ultrasonography of the right eye revealed a total open-funnel retinal detachment. A pars plana vitrectomy with a circumferential belt buckle with silicone oil injection was planned.

Results: During vitrectomy, a subretinal cataractous lens was unexpectedly identified inferiorly beneath a retinal dialysis. A relaxing retinectomy was carefully extended along the dialysis, allowing the lens to be mobilized into the vitreous cavity. Dense adhesions encasing the lens were meticulously dissected,

and the lens was subsequently extracted through a small incision cataract surgery (SICS) scleral tunnel. The procedure concluded with successful retinal reattachment under silicone oil tamponade.

Conclusions: The video illustrates managing a rare case of a subretinal dislocated cataractous lens. This case underscores the value of thorough peripheral retinal assessment and emphasizes the need for surgical adaptability and meticulous dissection techniques to manage unexpected intraoperative challenges effectively.

Abstract No.: 200359
Resilience in Surgery: Overcoming Setbacks for the Ultimate Outcome

*First Author: Veer **SINGH***
*Co-Author(s): Pranshu **GOEL**, Jayant **KUMAR**, Shishir **VERGHESE***

Purpose: To highlight the role of perseverance, vigilance, and adaptability in managing unexpected complications during vitreoretinal surgery, and to underscore the importance of learning from both setbacks and successes.

Methods: This educational film presents a series of real-life surgical scenarios, including retinal detachment repair, macular hole surgery, scleral-fixated intraocular lens implantation, and diabetic vitrectomy. Each case includes intraoperative complications that were managed through timely decision-making, surgical improvisation, and unwavering persistence.

Results: Despite facing unplanned and challenging surgical situations, successful anatomical and functional outcomes were achieved through continuous assessment and corrective action. The film also demonstrates instances where complacency contributed to avoidable complications, emphasizing the need for sustained focus and anticipation throughout the procedure.

Conclusions: Vitreoretinal surgery is inherently unpredictable, and complications are an integral part of the learning curve. This compilation reinforces that persistence, humility, and a proactive approach are critical to overcoming adversity and achieving surgical excellence. Regular reflection and refinement of techniques are essential to minimize complications and optimize patient outcomes.

Abstract No.: 201209
Retinal Mavericks: Stories of Intraocular Gymnastics

*First Author: Guruprasad **AYACHIT***
*Co-Author(s): Apoorva **AYACHIT**, Shrinivas **JOSHI**, Giriraj **VIBHUTE***

Purpose: To demonstrate a few challenging cases of closed globe internal refixation of dislocated/subluxated intraocular lens (IOL) and intraocular foreign body (IOFB).

Methods: We presented the unique minimally techniques for refixation of dangling/dislocated IOLs without the need for explantation. One case represented successful tackling of a challenging scenario involving a large corneal tear, a large, irregularly shaped IOFB, and retinal detachment.

Results: The various techniques described achieved refixation of dislocated/subluxated IOLs. In the case of IOFB, in spite of corneal sutures, the IOFB was removed, the retina could be reattached, and even ILM peeling was possible.

Conclusions: The techniques of closed globe internal refixation provide a minimally invasive, safe, and effective solution for selected cases of dislocated/subluxated IOLs. With modern technology and techniques, even cases which were earlier thought to be inoperable can be given a try.

Abstract No.: 200774
Scleral Buckling and External Drainage With Chandelier-Assisted Visualization for Rhegmatogenous Retinal Detachment (RRD)

*First Author: Junn **PAJARILLO***
*Co-Author(s): Anna Victoria **SAN PEDRO***

Purpose: To demonstrate a detailed surgical approach to scleral buckling with external drainage using chandelier-assisted visualization

in the management of RRD in a young adult patient.

Methods: This video presents a case of a 21-year-old male with RRD. A standard scleral buckling procedure was performed using a 240 encircling band and a 277 segmental buckle. Buckle elements were adjusted and secured with partial-thickness scleral bites using 5-0 braided polyester sutures. Chandelier-assisted wide-angle visualization was employed intraoperatively to localize retinal breaks and assess the extent of retinal detachment. After securing the buckle components, a radial scleral cutdown was performed in the inferotemporal quadrant. Following light cauterization, the choroid was punctured with a needle to allow controlled external drainage of subretinal fluid. Balanced salt solution was injected intravitreally to maintain intraocular pressure and restore globe tension. Final inspection confirmed that the retinal breaks were adequately supported by the segmental indentation and encircling band.

Results: The retinal breaks were well supported by the buckle and segmental indentation. Drainage was successfully achieved without complications such as retinal incarceration or hypotony. The retina remained attached postoperatively after completion of laser treatment.

Conclusions: Scleral buckling with external drainage remains an effective treatment for RRD. Chandelier-assisted visualization provides better visualization and eliminates the need to repeatedly don the indirect ophthalmoscope, streamlining workflow. Effective anatomical reattachment can be achieved with proper buckle placement and external drainage.

Abstract No.: 200800
Scleral Fixated Intraocular Lens (SFIOL) Multiverse: Paths to Restoring Vision

First Author: Harsh ***JAIN***
Co-Author(s): Mounika ***BOLISETTY****, Aditya* ***KELKAR***

Purpose: Aphakia management in cases of compromised capsular support poses significant challenges. There were various options available for the correction of aphakia.

Methods: This video shows the intricate techniques and the nuances of correction of aphakia via various techniques, both sutureless and with sutures.

Results: This video presents a selection of SFIOL techniques, showcasing both sutured and sutureless approaches. It emphasizes the nuances of surgical execution and techniques while highlighting the imperative role of SFIOL as a tool in the armamentarium of vitreoretinal surgeons.

Conclusions: This video reviews the various options of surgical management of aphakia and their technique, showcasing the importance of such skills for a vitreretinal surgeon.

Abstract No.: 200147
Scleral Fixation of a Dislocated Rigid Intraocular Lens (IOL) After Extracapsular Cataract Extraction (ECCE) Using a Two-Point, Four-Flanged Technique

First Author: Jocelyn ***SY***
Co-Author(s): Francis Ezra ***LAXAMANA***

Purpose: To present a surgery case demonstrating the successful rescue and scleral fixation of a dislocated rigid IOL using a two-point, four-flanged technique in a patient who previously underwent ECCE for a dense cataract.

Methods: The patient presented with a dislocated rigid IOL following a complicated ECCE. Surgical management involved retrieval and explantation of the original IOL. Two opposing sclerotomies were created 180 degrees apart. The haptics of the IOL were externalized using a 27-gauge needle and fixated using the canabrava flanged technique — cauterizing the ends of 5-0 Prolene suture to form four secure flanges, two at the haptics and two at the scleral exit sites. The IOL was centered, and stability was verified intraoperatively.

Results: The surgery resulted in a well-centered and stable IOL. The patient's best-

corrected visual acuity improved significantly from counting fingers preoperatively to 20/80 postoperatively. No intraoperative or postoperative complications were noted. The patient reported improved visual function and comfort.

Conclusions: This two-point, four-flanged scleral fixation technique provides a safe, effective, and efficient method for managing dislocated rigid IOLs, especially in eyes with poor capsular support. This is a cheaper alternative to other methods of secondary IOL implantation as it uses a rigid IOL and Prolene sutures, which are readily available. The technique offers excellent centration and stability with minimal surgical trauma and rapid visual recovery, making it a valuable option for complex secondary IOL cases.

Abstract No.: 200994
Scleral Plug – The Wall: From Pit to Clarity

First Author: Bhuvan ***CHANANA***

Purpose: To demonstrate the surgical technique and clinical outcomes of a scleral plug procedure as a novel intervention for optic disc pit maculopathy (ODPM), addressing limitations of conventional approaches.

Methods: This surgical video showcases the use of a customized scleral plug to externally tamponade the optic disc pit in a 7-year-old male patient with serous macular detachment secondary to ODPM. Conventional techniques such as pars plana vitrectomy (PPV), internal limiting membrane (ILM) peeling, fluid-air exchange, laser photocoagulation at the temporal disc margin, and gas tamponade have been employed with variable outcomes. In contrast, our approach involves harvesting a precise scleral graft, followed by insertion of a tailored scleral plug to act as a permanent mechanical barrier to fluid ingress. The procedure was combined with standard PPV and posterior hyaloid detachment induction, and foveal sparing ILM peeling.

Results: Postoperatively, the patient demonstrated significant anatomical improvement with resolution of subretinal fluid and reattachment of the macula by eight weeks. Best-corrected visual acuity improved from 6/60 to 6/9 at three-month follow-up. No intraoperative or postoperative complications were observed.

Conclusions: The scleral plug technique offers a promising adjunct or alternative to conventional surgical modalities for ODPM. By providing an external "wall" against persistent fluid influx, it may lead to faster and more sustained retinal reattachment, especially in cases refractory to standard techniques. The rate of recurrences is also lower.

Abstract No.: 200303
Small Pupil, Big Challenges

First Author: Arjun ***AURORA***
Co-Author(s): Akash ***CHOUDHARY****, Manisha* ***AGARWAL***

Purpose: Small pupil with retinal detachment is a challenging situation in itself. Our video demonstrates two situations of small pupil — a dropped nucleus with a chronic rhegmatogenous retinal detachment (RRD) and a second case of a chronic RRD in a young male. Although there are a variety of pupil expansion devices available, iris hooks are most reliable in our hands.

Methods: The first case was a 70-year-old male who suffered blunt trauma a year ago and presented to us with a non-dilating pupil, subluxated white cataract (8 clock hour subluxation), and a total RRD on B-scan with a visual acuity of light perception (PL). We first performed a near-total vitrectomy with base shaving and used phaco fragmentation for nucleus removal. The retina settled after fluid-air exchange (FAX). A 360-degree endolaser (EL) was performed, and 1,000 cSt silicone oil was injected. Our second case was a 30-year-old male who, after suffering blunt trauma from a ball two years ago, presented to us with a chronic RRD after undergoing complicated cataract surgery elsewhere. He had a non-dilating pupil with an anterior chamber intraocular lens (ACIOL) in situ. Iris hooks were implanted, and a meticulous vitrectomy was

performed. Following FAX, the break was lasered, and 360-degree EL was done.

Results: The first patient improved to the best-corrected visual acuity (BCVA) of 6/60. The second patient improved to BCVA of 6/18. Of pupil expansion devices available, iris hooks are the most reliable in our hands.

Conclusions: Iris hooks are the most reliable in our hands for poorly dilating pupils. Patience is of paramount importance.

Abstract No.: 200505
Surgery for Vitreomacular Traction (VMT): Releasing the Traction

*First Author: Apoorva **JADHAV***

Purpose: This video demonstrates unique techniques of posterior vitreous detachment (PVD) induction to be used in VMT. Surgery remains the definitive approach for VMT.

Methods: Three unique techniques have been used in the video demonstrating PVD induction in the case of VMT.

Results: To relieve the traction, the posterior cortical vitreous needs to be removed from the underlying retina. The traditional way of the induction of the PVD is from the disc, which can lead to lamellar macular defects, further worsening of the pathology.

Conclusions: This video showcased a few unique techniques to deal with the tractions.

Abstract No.: 201233
Surgical Nuances in the Management of Intraocular Cysticercosis

*First Author: Pradeep **VENKATESH***
*Co-Author(s): Keerthana **KASI**, Siddhartha **RAO B S**, Nawazish **SHAIKH***

Purpose: To demonstrate key surgical techniques in the successful management of various presentations of intraocular cysticercosis involving the posterior segment, based on a case series managed at a tertiary eye care center.

Methods: We present five cases of posterior segment cysticercosis managed using pars plana vitrectomy. Surgical approach was individualized based on the location, activity, and status (live vs. dead) of the cyst. Intraoperative video footage highlights critical steps, including safe dissection, cyst aspiration, membrane removal, and inflammation control. Perioperative steroid cover was used in all cases to mitigate inflammatory response.

Results: Case 1 involved a live subretinal cyst that was mobilized as a whole into the vitreous cavity and aspirated. Case 2 had a dead intravitreal cyst, which was carefully dissected from adherent vitreous and aspirated, followed by laser photocoagulation at the attachment site. Case 3 presented with dense vitritis and an intravitreal cyst; a thorough core and peripheral vitrectomy preceded cyst removal. Case 4 had a total white cataract with a cyst seen on ultrasound; phacoemulsification with intraocualr lens implantation was followed by vitrectomy and cyst removal. Case 5 showed a live motile larva in the vitreous, which was gently aspiration as a whole into the cutter without active cutting to minimized inflammation. All patients showed marked postoperative improvement in visual acuity with no recurrence at final follow-up.

Conclusions: Pars plana vitrectomy is a safe and effective method for the management of intraocular cysticercosis. Careful patient selection and surgical techniques individialized to each case are key in management.

Abstract No.: 201334
Tackling Fractional Retinal Detachment in Idiopathic Retinal Vasculitis, Aneurysms, and Neuroretinitis (IRVAN) Syndrome

*First Author: Ayushi **VERMA***
*Co-Author(s): Saravanan **VEERAPPAN***

Purpose: To demonstrate the management of fractional retinal detachment which occurred as a sequelae when treating a patient with IRVAN syndrome.

Methods: After successful control of inflammation with steroid therapy, the patient developed vision-threatening tractional retinal detachment involving the macula. A 25-gauge vitrectomy was done. Posterior hyaloid was cut.

The second membrane was identified with the help of retinal photography. The membrane was removed in toto, and endolaser was done.

Results: Postoperative optical coherence tomography shows resolution of tractional retinal detachment with vision improvement.

Conclusions: Identifying second membrane crucial for successful removal of membrane without creating Iatrogenic breaks. Surgery should be done after control of inflammation to prevent recurrent uveitis.

Abstract No.: 200251
Tackling Tripple Trouble – A Macular Hole Retinal Detachment, Choroidal Neovascular Membrane (CNVM) and Central Posterior Hyaloid Fibrosis (CPHF)

First Author: Isha ***ACHARYA***

Purpose: To demonstrate surgical stepwise approach to tackle a case of macular hole retinal detachment with CNVM and associated CPHF.

Methods: A 56-year-old male presented with blurred vision in the left eye for two months. The best-corrected visual acuity (BCVA) was 20/20 in the right eye (RE) and 20/100 in the left eye. The anterior segment was unremarkable with pseudophakia. Fundus in the right eye was normal, and an inferior extrafoveal macular hole (full-thickness macular hole [FTMH]) with subretinal fluid (SRF), epiretinal membrane (ERM), and a yellowish subretinal membrane were found in the left eye. The optical coherence tomography (OCT) confirmed FTMH and neurosensory detachment, type 2 CNVM, and CPHF. He was advised to have surgery but was lost to follow-up and returned seven months later with BCVA of 20/125, increasing SRF, and scarring CNVM. He underwent vitrectomy, ERM and internal limiting membrane (ILM) peeling, and C3F8 gas and bevacizumab injection.

Results: At one month, SRF had resolved markedly, and a notched, tall, peaked pigment epithelial detachment was noted on OCT, suggestive of polypoidal choroidal vasculopathy. The patient is planned for further intravitreal anti–vascular endothelial growth factor (anti-VEGF) injections.

Conclusions: This video highlights the stepwise approach with emphasis on challenges in staining the posterior hyaloid in the presence of a thick CPHF associated with CNVM, its peeling over a detached retina, along with meticulous ILM peeling without the aid of perfluorocarbon liquid.

Abstract No.: 201040
Taking on the XLs

First Author: Aziz Jan ***BASHIR***

Purpose: This video describes two methods for successful closure of large full-thickness macular holes (FTMH), which cannot be otherwise achieved with conventional surgical techniques.

Methods: In the first technique, a very large traumatic FTMH was repaired using a retinal autograft. After performing a core vitrectomy and inducing a posterior vitreous detachment, the internal limiting membrane (ILM) was peeled following staining with brilliant blue G (BBG). This was followed by recruiting a retinal tissue from the temporal retinal mid-periphery and placing it over the macular defect under a perfluorocarbon liquid bubble. In the second technique, concentric multilayered ILM flaps were fashioned over the FTMH, which resulted in successful anatomic closure of the hole.

Results: Both techniques were effective in successfully closing the large full-thickness macular holes.

Conclusions: Retinal autografts and multilayered internal limiting membrane flaps are effective tools to aid in the surgical closure of large macular holes.

Abstract No.: 201007
The Art of Macular Peeling

First Author: Rinal ***PANDIT***
Co-Author(s): Dhaivat ***SHAH***

Purpose: To establish a structured, artistic, and scientifically grounded methodology for internal limiting membrane and epiretinal

membrane peeling in various vitreomacular interface disorders.

Methods: A qualitative narrative approach was adopted to outline core principles based on surgical experience across cases of vitreomacular traction, macular holes, sub-internal limiting membrane hemorrhages, and post-retinal detachment membranes. Each step of the peel was dissected into thematic tenets: planning, initiation, execution, and judgment.

Results: "Plan with Purpose": Preoperative optical coherence tomography helps define the peel area, force vectors, and surgical strategy. "Create, Don't Grab": Flap creation should be gentle, tool-specific, and adapted to retinal compliance. "Peel with Poetry": Smooth, rhythmic, multi-directional motions yield better anatomical and functional outcomes. "Preserve the Fovea, Preserve the Future": Strategic restraint, especially near the fovea, prevents iatrogenic trauma and optimizes visual recovery.

Conclusions: Successful macular peeling extends beyond technique. It demands foresight, tissue respect, and timing. This four-tenet framework can enhance both surgical outcomes and the surgeon's intuitive judgment, transforming routine peels into refined retinal artistry.

Abstract No.: 200143
The Dancing Delight
First Author: Manisha ***AGARWAL***

Purpose: To report a case of subfoveal cysticercus cyst managed by pars plana vitrectomy.

Methods: A 30-year-old young male patient complained of a diminution of vision in the left eye for the last 7 days. The best-corrected visual acuity (BCVA) level of the left eye was 6/60, N36. Fundus showed a pearl-white subretinal cyst in the left eye wth dancing movements on throwing light. The patient was diagnosed as having a subfoveal cysticercus cyst documented on the fundus photo and optical coherence tomography. The patient underwent pars plana vitrectomy to remove the cyst after detaching the retina using a 41-gauge cannula. The magnetic resonance imaging showed neurocysticercosis in the brain. The patient was treated with anti-helminthic drugs and oral corticosteroids and recovered vision of 6/12, N9.

Results: The patient had a well-attached retina with a BCVA of 6/12, N9.

Conclusions: Timely intervention in the form of pars plana vitrectomy to remove the subretinal cysticercus cyst helps salvage the eye and the vision. Magnetic resonance imaging of the brain should be performed in all patients to rule out neurocysticercosis.

Abstract No.: 200394
The Oil Misplacement Odyssey
First Author: Mudit ***TYAGI***
Co-Author(s): Vidhi ***BAJPAI***

Purpose: To report a rare case of inadvertent suprachoroidal injection of silicone oil during vitreoretinal surgery and highlight the surgical approach for its recognition and management.

Methods: A 72-year-old female presented with acute postoperative endophthalmitis following cataract surgery and was scheduled for pars plana vitrectomy and intravitreal antibiotics. Intraoperatively, a rhegmatogenous retinal detachment was noted. During perfluorocarbon liquid to silicone oil exchange, silicone oil was inadvertently directed into the suprachoroidal space.

Results: The complication was promptly recognized intraoperatively. A controlled drainage technique was employed to manage the suprachoroidal silicone oil, and the procedure was completed without further complications. The accompanying surgical video demonstrates the sequence of events and management strategy.

Conclusions: Suprachoroidal injection of silicone oil is a rare intraoperative complication that can compromise surgical outcomes if not promptly recognized and managed.

Abstract No.: 200883
The One Who Does Not Operate, Does Not Have Complications: Vitreoretinal Surgery Challenges

*First Author: Vinay **PATIL***
*Co-Author(s): Mohit **DOGRA**, Ramandeep **SINGH**, Basavaraj **TIGARI***

Purpose: In this surgical video, a series of intraoperative complications are demonstrated, along with their respective management strategies. Proper on-table management not only prevents further adverse events but also maximizes the likelihood of preserving and improving the patient's visual outcome.

Methods: In this surgical case series, all patients underwent standard 25-gauge pars plana vitrectomy performed by a single surgeon. We aim to highlight commonly encountered intraoperative complications, including accidental scleral perforation during the passage of a 240-band encirclage, subretinal migration of perfluorocarbon liquid (PFCL) in cases with advanced anterior proliferative vitreoretinopathy–associated retinal detachment (RD), iatrogenic retinal breaks related to star-fold dissection during RD repair, lens capsular traction causing retinal dialysis in buphthalmic eyes, persistent RD unresponsive to PFCL due to the horseshoe tear (HST) flap acting as a one-way check valve, and migration of the silicon tip during brilliant blue G (BBG) dye injection in epiretinal membrane removal procedures.

Results: This surgical video demonstrates the management of intraoperative vitreoretinal complications using both conventional and unconventional techniques, accompanied by detailed explanations. It aims to enhance surgeons' understanding and preparedness to effectively handle various challenges during surgery. Watch carefully, learn the strategies, and strive to develop skilled, confident hands to serve those in need.

Conclusions: Understanding the potential challenges and complications during vitreoretinal surgery is crucial for enhancing surgical outcomes and learning. Developing skilled and steady hands is essential to provide the best care for those in need, ensuring better visual outcomes and preserving eyesight. Be a "gifted hand" for those "needy eyes".

Abstract No.: 201084
The Power of Hope: Surgical Management of Chronic Traumatic Rhegmatogenous Retinal Detachment (RRD) in a Pediatric Patient

*First Author: Rochele **PILONES***

Purpose: To demonstrate the surgical approach, challenges, and outcomes in managing a chronic, traumatic RRD in a pediatric patient.

Methods: This is a case of an eight-year-old female who presented with a chronic total retinal detachment of the right eye following blunt trauma sustained several years prior. Visual acuity was poor light projection with accompanying sensory exotropia. The synechiae and dense cataract obscured the view of the posterior segment. B-scan ultrasonography showed total retinal detachment with stiff membranes and no intraocular mass. A three-port 23-gauge pars plana vitrectomy was performed under general anesthesia. An anterior chamber infusion was initially used to prevent hypotony and subretinal infusion during trocar placement. Extensive membrane peeling was required to relieve traction. Subretinal fluid drainge, fluid-air exchange, followed by endolaser photocoagulation and silicone oil tamponade were done.

Results: The retina was successfully reattached intraoperatively. Postoperatively, the eye remained anatomically stable under silicone oil at three-, six- and nine-month follow-up. No significant postoperative inflammation or complications occurred. Visual acuity improved to 20/60. The patient was comanaged with pediatric ophthalmology. The family was counseled regarding the importance of long-term follow-up.

Conclusions: Surgical intervention in pediatric patients with chronic traumatic RRD, even with poor baseline visual function, can result in favorable anatomical outcomes and improved

vision. This case highlights the potential for visual rehabilitation and the value of offering a surgical chance in eyes previously considered functionally lost.

Abstract No.: 201107
The Relentless Retinal Rebellion: Management of Closed Funnel Retinal Detachment With Extensive Proliferative Vitreoretinopathy (PVR) and Subretinal Migrated Cataractous Lens

First Author: Vishal ***JADHAV***
Co-Author(s): Kasturi ***CHAVAN****, Anup* ***KELGAONKAR***

Purpose: To describe surgical management of a post-traumatic complex rhegmatogenous retinal detachment (RRD).

Methods: A 62-year-old female presented two weeks post–scleral tear repair with best-corrected visual acuity of perception of light and inaccurate projection of rays. She also had iridodialysis, traumatic cataract, and a posteriorly closed funnel retinal detachment of rhegmatogenous configuration. She was taken up for vitreoretinal surgery.

Results: A 23-gauge pars plana vitrectomy was performed. Upon initiating infusion, the cataractous lens nucleus sank posteriorly. Intraoperative challenges included subretinal migration of the hard lens nucleus, which was retrieved through the retinal tear against infusion and gravity and emulsified using a fragmentome. The funnel configuration was opened by peeling dense epiretinal membranes, revealing 360-degree subretinal PVR with blood clots. A 360-degree relaxing retinectomy enabled meticulous removal of subretinal PVR, leading to complete retinal reattachment without slippage. The retinectomy edges were barraged and case was closed under silicone oil endotamponade.

Conclusions: A traumatic total funnel retinal detachment with PVR often demands extensive subretinal exploration and meticulous intervention. Unexpected intraoperative hurdles, including subretinal lens migration and retinal slippage, may further complicate the case. Careful dissection of gliotic membranes, clearance of subretinal hemorrhagic clumps, and, on rare occasions, removal of a displaced subretinal nucleus are key to achieving optimal anatomical success.This case highlights the layered complexity of traumatic funnel detachments and strategic surgical maneuvers to overcome them.

Abstract No.: 201398
The Resurgery Report: Vitreoschisis-Induced Vitreous Cortex Remnants (VCRs)

First Author: Aayesha ***KHANUM***
Co-Author(s): Venugopal ***REDDY***

Purpose: In our video, we aim to look into one of our rhegmatogenous retinal detachment failure under silicon oil tamponade and study a very common but under-recognized cause for redetachment — vitreoschisis-induced VCR.

Methods: Zero cases of rhegmatogenous retinal detachment were studied, and multiple/focal triamcinolone acetonide staining was used as a visualization technique. Intraocular pick/internal limiting membrane forceps were used to initiate the dissection and complete the vitrectomy probe.

Results: Through multiple surgeries and electron microscopy pictures, we noticed the almost ubiquitous nature of this entity with prevalence rate of 98%. Patient were followed up for six months and the re-detachment rate in rhegmatogenous retinal detachment was observed to be 2%.

Conclusions: Vitreoschisis induced vitreous cortex remnant is almost ubiquitous in nature. We conclude from our experience, primarily in rhegmatogenous retinal detachments that vitreoschisis-induced VCR is an under-recognized cause for proliferative vitreoretinopathy (PVR) changes and redetachments, as complete removal of vitreous can never be ensured until after multiple staining and removal of VCR. We recommend that, although complete removal of VCR may be time consuming, but in high-risk cases with inferior break or preoperative PVR changes,

limited removal in inferior quadrants is strongly advised.

Abstract No.: 200747
The Retina That Should Never Have Had Retinal tears
*First Author: Rajiv **GANDHI***

Purpose: This video demonstrates a complication which occurred during a routine retina surgery for a dropped nucleus and how it was managed.

Methods: A patient with nucleus drop who underwent vitrectomy at the Anupam Eye Hospital and Laser Center, Akluj, was included for presentation after consent from the patient.

Results: N/A

Conclusions: Complications can occur during routine vitrectomy surgeries. Identifying the cause and managing the same can improve the surgical outcome, and proper assessment can prevent future complications.

Abstract No.: 201237
The W(hole) Truth – Evolution of Macular Hole Surgeries
*First Author: Apoorva **JADHAV***

Purpose: This film will give us information on how macular hole surgeries have evolved over the years and how in future we can manage macular hole surgeries while keeping the basics in mind.

Methods: Different techniques were demonstrated in this video for the management of macular hole surgeries.

Results: Guiding vitreoretinal surgeon on different techniques of macular hole surgeries provides better visual outcomes for patients and takes us into the future.

Conclusions: Overall, the video aims to educate and guide vitreoretinal surgeons in effectively managing macular holes while emphasizing the patient better visual outcomes.

Abstract No.: 200610
Time-Saving Potential of Multispot Endolaser Technology in 25-Gauge Vitrectomy
*First Author: Vara **WUYYURU***
*Co-Author(s): Alireza **MIRSEPASSI**, Qing **XIANG**, Mrinali **GUPTA***

Purpose: To evaluate the efficiency of the new Unity Vitreoretinal Cataract System (VCS) multispot endolaser probe, compared to standard single-spot endolaser, in a wet-lab setting.

Methods: 25-gauge (G) multispot laser probe (MSLP) and standard 25G single-spot illuminated flex curve (IFC) laser probes were utilized with Unity VCS to perform panretinal photocoagulation (PRP) endolaser in customized Bioniko model eye. Testing was conducted for three different laser configurations (6 eyes each, 18 total): four-spot MSLP, two-spot MSLP, and one-spot IFC laser. Laser pulse duration was 200 ms across all configurations; power and interval time were adjusted according to surgeon preference. The number of spots and time required for complete PRP were recorded, and the time per laser spot was calculated.

Results: For four-spot MSLP, laser power was 200 mW and pulse interval 300 ms. Mean total number of laser spots was 1524 (1292-1660). For single-spot IFC, laser power was 200-280 mW and pulse interval 200 ms. The mean total number of laser spots was 1108 (934-1419). The total time for endolaser PRP was 4.2 minutes for four-spot MSLP (3.9-4.7 min) and 9.5 minutes (8.4-11.1 min) for single-spot IFC laser. The mean time per laser spot was 0.166 seconds for four-spot MSLP, 0.312 seconds for two-spot MSLP, and 0.516 seconds for single-spot IFC.

Conclusions: Four-spot MSLP endolaser was 3.1 times faster than single-spot IFC, and two-spot MSLP configuration was 1.7 times faster than single-spot IFC in a single-surgeon wet-lab endolaser PRP in model eyes.

Abstract No.: 200258
Tiny Eye, Timely Intervention: Pars Plana Vitrectomy in Pediatric Endogenous Endophthalmitis

First Author: Niccolo ***VALENCIA***
Co-Author(s): Francis Ezra ***LAXAMANA***

Purpose: To present the surgical management and visual outcome of a rare case of endogenous endophthalmitis in a pediatric patient, highlighting the role of pars plana vitrectomy combined with intravitreal antibiotics and silicone oil tamponade.

Methods: A 5-year-old male presented with redness and foreign body sensation in the right eye. On slit-lamp examination, a central whitish corneal opacity was noted with dense whitish pupillary membranes. Ocular ultrasonography revealed dense vitreous opacities suggestive of vitritis. A diagnosis of endogenous endophthalmitis was made. The patient underwent 23-gauge pars plana vitrectomy and lensectomy with intravitreal injection of vancomycin and ceftazidime, followed by silicone oil tamponade due to intraoperative concerns of retinal ischemia, retinal tears, and persistent inflammation. Multiple techniques were utilized to debulk the inflammation and restore the anatomy of the child's eye.

Results: Postoperative recovery was uneventful. Ocular inflammation subsided, as well as the patient's comfort. The eye remained stable with the silicone oil in situ. Removal of silicone oil and secondary implantation of an intraocular lens is being planned in the future.

Conclusions: Endogenous endophthalmitis in the pediatric population is rare and may present subtly. Early surgical intervention with vitrectomy and appropriate intravitreal antibiotic therapy, combined with silicone oil tamponade in select cases, can lead to favorable anatomical and functional outcomes.

Abstract No.: 201307
To Drop or Not to Drop? A Case of Pars Plana Lensectomy (PPL) Versus Pars Plans Vitrectomy (PPV) Phacofragmentation in a Posteriorly Dislocated Traumatic Cataract

First Author: Mara Sabrina ***CLEMENTE***

Purpose: To show how surgical planning and flexibility in surgery help a beginning vitreoretinal fellow.

Methods: The author attempted a PPL for a posteriorly dislocated traumatic cataract. Upon initial examination, anterior lens extraction was contemplated, but this was deferred due to the presence of vitreous in the anterior chamber, and the lens was located almost in the mid vitreous. PPL was initiated, but due to the hardness of the cataract, they shifted to dropping the lens and doing PPV with phacofragmentation instead. The procedure was done alternating the vitrector and fragmatome depending on the size and hardness of the nuclear and cortical materials.

Results: The patient was able to tolerate the procedure well. Scleral fixated intraocular lens via four-point fixation with Gore-Tex suture was done together with the External Disease and Cornea service. The patient's visual acuity on day 1 postoperatively was 6/12.

Conclusions: The author shows a video is decision-making and contemplates the lessons learned in a complicated but simple surgery.

Abstract No.: 200972
Traction Repair: Composed Mind and Unwavering Focus

First Author: Mousumi ***BANERJEE***
Co-Author(s): Thirumalesh ***MOCHI BASAVARAJ***

Purpose: This video demonstrates bimanual vitrectomy techniques in a series of two complex tractional retinal detachments with no apparent plane of dissection.

Methods: We employed bimanual technique to demonstrate tractional retinal detachment repair in cases where the plane of dissection is created bimanually at the beginning of surgery

using a 26-gauge needle, which is followed by the use of forceps and vitrectomy cutter.

Results: Results are demonstrated using postoperative pictures in the video.

Conclusions: Bimanual technique is a relevant skill which is needed for surgeons while operating complex tractional retinal detachments.

Abstract No.: 200681
Two-Port Revision Vitreoretinal Surgery for Retinal Redetachment Under Silicone Oil

*First Author: Pradeep **VENKATESH***
*Co-Author(s): Siddhartha **RAO B S**, Nawazish **SHAIKH***

Purpose: To demonstrate the technique and advantages of two-port revision microincision vitrectomy surgery (MIVS) for managing retinal redetachment under silicone oil, with emphasis on removal of proliferative vitreoretinopathy (PVR) membranes and intraoperative retinal stabilization.

Methods: This technique involves performing membrane dissection under retained silicone oil, which provides effective tamponade and acts as a "third hand" to stabilize the retina during intricate maneuvers. The use of only two ports, without a fluid infusion line, simplifies the procedure and avoids the need for silicone oil removal and reinfusion, thus minimizing surgical trauma, reducing operative time and reducing postoperative inflammation. Key surgical steps include careful removal of PVR membranes, drainage of subretinal fluid under oil, and precise intraocular pressure regulation during the final stages of surgery through silicone oil titration.

Results: The video demonstrates successful removal of tractional elements and effective retinal reattachment. Retaining silicone oil throughout the procedure enhances visualization and control, and the two-port technique enables efficient execution without compromising safety.

Conclusions: Two-port revision MIVS or sub-silicone oil surgery is a safe and effective approach for managing complex retinal redetachments, particularly in eyes with significant PVR. By reducing surgical time and avoiding oil exchange, this technique offers advantages in retinal stability and postoperative outcomes, making it a valuable tool in select revision cases.

Abstract No.: 200704
Two-Port Vitrectomy: Surgical Treatment of Epiretinal Membrane (EM) and Macular Hole

*First Author: Ivan **FROLYCHEV***

Purpose: To analyze the results of surgical treatment for EM and macular hole using two-port vitrectomy.

Methods: Thirty patients with EM underwent surgical treatment. All underwent vitrectomy with the removal of the EM and internal limiting membrane; the operation was completed with the introduction of air (1/3 of the vitreal cavity). Twenty-eight patients with stage II-IV macular hole were treated. All patients underwent vitrectomy with removal of the VPM, injection of air, and application of one to two drops of platelet-rich plasma. The results were evaluated six months after surgery.

Results: The best-corrected visual acuity (BCVA) improved from logMAR 0.5 ± 0.1 to 0.2 ± 0.05 in patients with EM ($P = 0.008$, $n = 30$). In patients with macular hole, the BCVA improved from logMAR 0.9 ± 0.2 to 0.3 ± 0.1 ($P = 0.02$, $n = 28$). Closure of the macular hole was achieved in 100% of cases ($n = 28$). Additionally, the thickness of the inner and middle retinal layers was significantly reduced after surgery for EM, decreasing by 40% and 21%, respectively.

Conclusions: The results obtained demonstrate that the two-port vitrectomy technique is safe, low-traumatic, and effective in treatment.

Abstract No.: 200296
Under Air Vitrectomy With Perfluorocarbon Liquid (PFCL) Support for Giant Retinal Tear

First Author: Pradeep ***KUMAR***
Co-Author(s): Mrinalini ***SINGH***

Purpose: Interface vitrectomy helps increase the field of view in vitreoretinal surgeries. In cases of giant retinal tears, it alleviates the need for indentation, which may cause slippage of PFCL underneath the tear and prevent its attachment.

Methods: This technique has been in practice at our institute for the past two years, and around 50 cases of giant retinal tears have achieved successful attachment postoperatively.

Results: One such case involves a 65-year-old man who presented with sudden, progressive diminution of vision in his left eye for several days. The patient reported no history of trauma; however, a subluxated posterior chamber intraocular lens was observed, with a preoperative distant visual acuity of hand movements close to the face. Fundoscopy revealed a giant retinal tear extending for approximately 5 clock hours with macular involvement.

Conclusions: An intraoperative video of the case is being submitted. The patient achieved 6/18 vision on postoperative day 1 and improved to 6/9 after 6 weeks.

Abstract No.: 200222
Unraveling an Unusual Retinal Detachment

First Author: Shishir ***VERGHESE***
Co-Author(s): Prithvi ***CHANDRAKANTH****, Verghese* ***JOSEPH***

Purpose: To report a rare case of rhegmatogenous retinal detachment associated with toxoplasma retinochoroiditis, managed surgically and medically with a favorable anatomical and visual outcome.

Methods: A 75-year-old male presented with decreased vision in the right eye. His vision in the right eye was hand movements. There was no history of trauma or systemic illness before ocular surgery. Fundus examination and spectral-domain optical coherence tomography revealed a retinal detachment involving the inferotemporal arcade with an adjacent grey-white lesion and retinal break. Fluorescein angiography and indocyanine green angiography demonstrated increased hyperfluorescence with late leakage. A systemic uveitis workup was negative.

Results: The patient underwent pars plana vitrectomy with lesion removal and silicone oil tamponade. Histopathological evaluation of the excised lesion revealed inflammatory and fibrotic changes. Postoperatively, the retina was reattached and vision improved to 6/60, limited by a visually significant nuclear sclerosis (Grade 3). A retinitis lesion was subsequently noted adjacent to the previous retinal break. Serological testing revealed elevated toxoplasma IgG titers. A diagnosis of retinal detachment secondary to toxoplasma retinochoroiditis was made. The patient was treated with triple therapy (pyrimethamine, sulfadiazine, and folinic acid). Following treatment, the active retinitis lesion resolved into a scar. Three months later, the patient underwent phacoemulsification cataract surgery with silicone oil removal. The final visual acuity improved to 6/36.

Conclusions: This case highlights an unusual presentation of toxoplasma retinochoroiditis causing rhegmatogenous retinal detachment. Early surgical intervention combined with appropriate antimicrobial therapy can lead to good anatomical and visual outcomes.

Abstract No.: 201094
War of Proliferative Vitreoretinopathy (PVR) – An Ultimate Surgical Conquest!!

First Author: Rajpal ***VOHRA***
Co-Author(s): Vineet Kumar ***BATWANI****, Nawazish F.* ***SHAIKH***

Purpose: To demonstrate a surgical video of a case of chronic, twice-operated retinal detachment presenting with extensive PVR changes.

Methods: A 30-year-old one-eyed gentleman presented with complaints of diminution of

vision in the right eye for past 15 days. He had a history of twice pars plana vitrectomy for retinal detachment in the right eye 10 years back, with no previous documents available. On examination, the right eye was found to have redetachment with advanced anterior PVR changes with a temporal giant retinal tear. The patient was subsequently planned for pars plana vitrectomy in the right eye. Intraoperative residual vitreous removal was done, and all epiretinal membranes were removed. However, the retina was still taut, so it was decided to create a large nasal relaxing retinectomy followed by fluid-air exchange. Silicone oil was injected at the completion of surgery, and advised prone positioning with standard postoperative care.

Results: At postoperative four weeks, the retina was well attached and breaks were adequately lasered. However, improvement in visual acuity was minimal but navigable for the patient.

Conclusions: Late redetachments may present even beyond a decade and are associated usually with chronic pvr changes and taut retina which must be tackled with effective membrane peeling and relaxing retinectomies if needed. Visual gains may or may not be magical but definitely significant especially for none eyed individuals like ours.

Abstract No.: 200870
Where There Is a Will, There Is a "View"

First Author: Vinay ***PATIL***
Co-Author(s): Mohit ***DOGRA****, Ramandeep* ***SINGH****, Basavaraj* ***TIGARI***

Purpose: Surgical management of retinal detachment in a child with buphthalmos-associated corneal opacity.

Methods: A two-year-old male child with primary congenital glaucoma was referred by the glaucoma team for the management of retinal detachment in the right eye. The child had undergone multiple diode laser cyclophotocoagulation in both eyes since birth. Examination under anesthesia revealed a corneal diameter of 13.5 x 13.5 mm, with total leucomatous corneal opacity and inferior clearing in the right eye; the left eye had total corneal opacity. Ultrasound B-scan showed total rhegmatogenous retinal detachment in the right eye and attached retina in the left eye. Hybrid endoscopic and standard operating microscope assisted vitrectomy was planned. Intraoperatively, the media clarity was surprisingly clear enough to perform a 25-gauge pars plana vitrectomy on a standard operating microscope and silicon oil tamponade was given.

Results: The child's retina was successfully attached with oil in situ and the child was ambulatory as shown in the video.

Conclusions: The video showcases the surgical techniques used circumvent the intraoperative challenges due to unique surgical anatomy and poor media clarity. The child at one year follow-up underwent silicone oil removal with best-corrected visual acuity of 6/60.

Translational Medicine

Abstract No.: 201289
A Routine Case of Extracapsular Cataract Extraction

First Author: Mary Claudette ***ARCELLANA***

Purpose: To present a routine case of extracapsular cataract extraction for residents in-training.

Methods: A routine case of extracapsular cataract extraction was done in a 62-year-old male with a hypermature cataract in the right eye. After carefully dissecting the conjunctiva and the Tenon's capsule, a 9–12 mm triplanar scleral tunnel incision is made to access the anterior chamber. Anterior capsulotomy was performed to open anterior capsule via the envelope technique. The lens nucleus is gently expressed out of the capsular bag using pressure and viscoelastics. Residual cortical material is aspirated using an irrigation/aspiration (I/A) system. Iris prolapse was encountered during the I&A. A posterior chamber intraocular lens (IOL) is inserted into the capsular bag. The large incision is

closed using six sutures. Antibiotics and anti-inflammatory drops were given; the patient is monitored for complications such as infection, inflammation, or IOL dislocation.

Results: The patient achieved a visual acuity of 20/120 on postoperative day 1, which gradually improved to 20/20 on postoperative day 21. Increased intraocular pressure (IOP) was noted on day 1 and was managed with IOP-lowering medications. Postoperative refraction on the third week was -1.25 Dsph = -0.50 Dcyl X 112.

Conclusions: Creating precise incisional planes is essential to prevent intraoperative iris prolapse. Thorough aspiration of viscoelastic material is important to reduce the risk of postoperative intraocular pressure elevation. Additionally, consistent practice in suturing techniques is strongly recommended to ensure optimal surgical outcomes.

Abstract No.: 201288
Extracapsular Cataract Extraction
*First Author: Sophia Anne **SAQUILAYAN***

Purpose: To present a video of a second-year resident performing an extracapsular cataract extraction.

Methods: An extracapsular cataract extraction was done to remove a total white mature cataract.

Results: The cataract was noted to have been removed.

Conclusions: Extracapsular cataract extraction is a surgical technique not done routinely anymore. Even so, everyone should have knowledge in doing it especially beginning cataract surgeons.

Abstract No.: 201294
Extracapsular Cataract Extraction (ECCE)
*First Author: Amado Miguel **LAVALLE***

Purpose: To present a case of a routine ECCE of a brunescent cataract.

Methods: A 55-year-old male underwent routine ECCE for a brunescent cataract in the right eye. Following careful dissection of the conjunctiva and Tenon's capsule, a triplanar scleral tunnel incision measuring 9–12 mm was created to access the anterior chamber. An anterior capsulotomy was performed using the envelope technique. The dense lens nucleus was gently delivered from the capsular bag with the aid of pressure and viscoelastics. Remaining cortical material was removed via an irrigation/aspiration (I/A) system. A posterior chamber intraocular lens (IOL) was then implanted into the capsular bag. The large incision was secured with six sutures. Postoperatively, antibiotic and anti-inflammatory drops were administered, and the patient was monitored for potential complications such as infection, inflammation, or IOL displacement.

Results: Cataract was successfully extracted, and the IOL was in place.

Conclusions: This case marks my sixth successful ECCE. The procedure was performed on a patient with a brunescent cataract, presenting the expected technical challenges of dense lens removal and large incision closure. Each step—from scleral tunnel creation to IOL implantation—was executed with improved confidence and efficiency. Compared to previous cases, I demonstrated greater surgical control, tissue handling, and decision-making in managing a mature cataract. This case further strengthened my understanding of the ECCE technique and postoperative management. Continued hands-on experience is crucial to refining my surgical skills and ensuring optimal patient outcomes.

Abstract No.: 200973
Role of Glia in Macular Hole Closure
*First Author: Mousumi **BANERJEE***
*Co-Author(s): Aayesha **KHANUM**, Thirumalesh **MOCHI BASAVARAJ***

Purpose: To demonstrate the role of glia in macular hole closure.

Methods: We demonstrated the presence of glia in the internal limiting membrane (ILM), hyaloid graft tissue, and retinal autograft, and also demonstrated glial presence in patients' optical coherence tomography in

the postoperative period at various follow-up intervals. We further demonstrated the presence of glial tissue using immunofluorescent imaging in the sample ILM, posterior hyaloid, and retinal autograft tissue as well, so as to establish proof of concept of glial tissue role in the closure of macular hole.

Results: Glial cells are responsible for macular hole closure after macular hole surgery.

Conclusions: Posterior hyaloid separation and ILM peeling during surgery relieve both anteroposterior and tangential traction; however, the hole is closed by glial tissue, regardless of the technique used by the surgeons.

PAO

Cataract & Refractive Surgery

Abstract No.: 201373
A Surgical Video Presenting a Manual Small Incision Cataract Surgery for a Hypermature Cataract

First Author: Isabella ***BONDOC***

Purpose: This video demonstrates how a hypermature cataract may be extracted with minimal induced astigmatism and endothelial damage using a manual small incision technique with comparable outcomes with phacoemulsification and less induced astigmatism compared to extracapsular cataract extraction.

Methods: Retrobulbar block was done to anesthetize the eye. A limbal conjunctival flap was made to expose the sclera where a sclerocorneal tunnel was made. A large capsulorhexis was created; then the hydrodissection of the nucleus was done with gentle tilting and rotation of the nucleus to prolapse the lens into the anterior chamber. The lens was removed with a lens loop through the scleral tunnel and an irrigation/ aspiration probe was used to remove the remaining cortical contents. A foldable posterior capsule intraocular lens was placed together with intracameral antibiotics and the wound was sealed with basic saline solution.

Results: One week post-procedure, the patient had minimal post-operative pain with subjectively drastic improvement of vision. The patient achieved a visual acuity of 20/32 sans correction, improved from a previous visual acuity of hand movement with good light projection. On slit lamp examination, the patient had a clear cornea with no corneal edema, minimal corneal astigmatism, no intraocular pressure spikes with minimal intraocular inflammation.

Conclusions: The use of a manual small incision technique provides excellent outcomes with a low rate of surgical and

postoperative complications that is comparable to phacoemulsification at a much lower cost and provides less induced corneal astigmatism compared to extracapsular cataract extraction

Abstract No.: 201365
Beginner Phacoemulsification: Salvaging a Bowled Out Nucleus

*First Author: J.Raphael **TAN***

Purpose: To showcase a beginner surgeon's attempts to salvage a bowled out nucleus during an attempted stop and chop lateral separation maneuver.

Methods: Stop and chop was initially employed, but due to inadequate depth of groove and blunt tipped chopper placement, nucleus was bowled out.

Results: Using the thicker edges of the nucleus, engaging them with the phaco tip, quadrant creation can still be done albeit with greater care as there is less room to advance instruments - which may lead to posterior capsular rupture. Remaining areas of nucleus can be prolapsed a bit and brought out of the bag, where chopping can be done.

Conclusions: Through careful manipulation of remaining nucleus, using thicker portions to engage the phaco tip, the bowled out cataract can still be salvaged.

Abstract No.: 201001
Best of Both Worlds: Phacoemulsification through a Corneo-Scleral Tunnel

*First Author: Marie Lou **GUILLERMO***

Purpose: The video shows a brunescent cataract on a 40 year old female who has high myopia. Pre operative planning suggested an extracapsular cataract removal due to the advanced brunescence of the cataract. However, due to the patient's age and acceptable specular microscopy values, we decided to proceed with a phacoemulsification but kept the option of a manual extraction open by performing it through a superior corneo-scleral tunnel.

Methods: A superior corneo-scleral tunnel was made after perimetry. The first plane was made with a blade 15 in a semi frown pattern and the second plane was done using a crescent knife. A side port was then made and viscoelastic was instilled before the anterior chamber was entered using a 2.75 keratome. The phacoemulsification probe was inserted and the phaco proper was done without complications. After the cortical material was aspirated, a foldable monofocal lens was inserted in the bag. The ports were then stromal hydrated and conjunctiva was sutured.

Results: The phacoemulsification power was enough to crack the lens and complete the operation with no incidence.

Conclusions: The corneo-scleral tunnel provides an option to easily convert to a manual cataract extraction while still being a closed system to perform phacoemulsification in.

Abstract No.: 201271
Flanged Rescue: Intraocular Refixation of a Subluxated Scleral-Fixated Single-Piece Foldable Lens with Eyelets at the Optic-Haptic Junction

*First Author: Romeo **DELA CRUZ***
*Co-Author(s): Bobbie Marie **SANTOS***

Purpose: Subluxation of a scleral-fixated intraocular lens (IOL) with eyelets at the optic-haptic junction presents a complex surgical challenge. This surgical video demonstrates intraocular refixation using flanged 6-0 polypropylene for a subluxated, transscleral-sutured, single-piece foldable IOL with eyelets, following 10-0 polypropylene suture breakage.

Methods: A 35-year-old male presented with blurred vision nine years after scleral fixation of an enVista® MX60 IOL (Bausch and Lomb, Inc.) using 10-0 polypropylene. Best-corrected visual acuity (BCVA) with aphakic correction was 20/70. Slit lamp examination showed corectopia, poor dilation, IOL subluxation, and prolapsed vitreous. Under retrobulbar anesthesia, anterior vitrectomy was performed. The subluxated IOL was retrieved, and the broken 10-0 suture trimmed. Using a 30-gauge

needle, tangential sclerostomies were created 2.5 mm posterior to the limbus. A 6-0 polypropylene suture was threaded through the IOL eyelets and externalized. Flanges were created using low-temperature cautery and buried in the sclera. Both eyelets were secured to prevent future dislocation.

Results: The IOL was successfully repositioned and stabilized. At one-month follow-up, BCVA improved to 20/40 with no ocular complaints. All four flanges remained covered, with no conjunctival erosion or IOL tilt.

Conclusions: Flanged 6-0 polypropylene for IOL refixation offers a practical, durable, and minimally traumatic alternative to IOL exchange for subluxated lenses. Symmetric suture placement and precise tension control are essential for optimal centration and long-term stability. This video highlights the reproducibility and clinical value of the technique in complex secondary IOL cases.

Abstract No.: 200344
Hanging On

*First Author: Erwin **ISLA***
*Co-Author(s): Jose Martin Iv **VELASCO***

Purpose: To demonstrate a case with zonulysis as well as adapting to intraoperative challenges.

Methods: Surgical case was conducted using a Stellaris machine using a single-linear settings with a Rosen chopper. An Alcon MA60AC lens was implanted and the case was recorded using an open-source third-party software (OBS Studio).

Results: This is a case of a 74-year-old Filipino female with 1 year progressive blurring of vision and denies history of trauma. On examination, her visual acuity was 20/150 uncorrected which improves to 20/50 on the right eye. On dilation, her maximum dilation was 5mm with a cataract grading of NO5NC5P2 hence advised surgery. Intraoperatively, during a stop-and-chop maneuver, excessive downward force from the phaco-probe at the initial crack caused a 4-clock hour zonulysis. Half of the cataract was removed but due to the instability of the bag, a capsular tension ring (CTR) was placed. During removal of the remaining hemi-nucleus, a peaked anterior capsular margin was noted. On further inspection, the CTR was found at the ciliary sulcus. The CTR was then repositioned into the capsular bag wherein anterior vitrectomy of vitreous prolapse was done. A 3-piece IOL was placed in the bag and the case was ended. The lens was noted to be centered and stable. On 1 week post-op, best corrected vision is 20/40 with a centered and stable lens.

Conclusions: Prompt recognition of complications such as zonulysis is important ensure completion of the case with good post-operative outcomes.

Abstract No.: 200872
Lensectomy and Optic Capture in a Pediatric Polar Cataract: Surgical Video Demonstrating Posterior Capsulorrhexis with Viscoelastic Tamponade and Sulcus Placement of Haptics in a 7-Year-Old Patient

*First Author: Jay Marianito **VICENCIO***
*Co-Author(s): Joanna Mae **O'SANTOS***

Purpose: To demonstrate a stepwise surgical approach to managing a polar cataract in a pediatric patient using lensectomy, primary posterior capsulorrhexis, and optic capture, with emphasis on vitreous protection and IOL stability.

Methods: A 7-year-old presented with visually significant polar cataract. Lensectomy was performed with care to avoid rupturing the fragile posterior capsule. After lens material removal, a posterior capsulotomy was performed. Cohesive viscoelastic was injected through the opening to tamponade the anterior vitreous face and prevent prolapse. A controlled primary posterior capsulorrhexis was created using Utrata forceps. A three-piece intraocular lens was then placed with the haptics in the ciliary sulcus. The optic was gently pushed through the anterior capsulorrhexis to achieve stable optic capture within the capsular opening.

Results: The optic remained securely captured with excellent centration and stability. There was no vitreous prolapse or need for anterior

vitrectomy. The sulcus-fixated haptics provided support without iris chafing. Postoperatively, the visual axis remained clear with no signs of posterior capsular opacification or inflammation during follow-up.

Conclusions: This video highlights the value of optic capture with sulcus IOL placement in pediatric cataract cases, especially when managing polar cataracts with weak posterior capsules. Viscoelastic-assisted posterior capsulorrhexis provides a safe method for maintaining vitreous integrity and ensuring long-term visual axis clarity.

Abstract No.: 200411
Management of a Hypermature Cataract with Zonular Compromise and Pupil Reconstruction in Phacomorphic Glaucoma

*First Author: Jay Marianito **VICENCIO***
*Co-Author(s): Alyssa Marie **HIZON***

Purpose: To present a surgical approach for hypermature cataract with zonular instability and fixed dilated pupil using phacoemulsification, CTR insertion, and iris reconstruction.

Methods: A 56-year-old male presented with progressive blurring of vision in the right eye and a history of angle-closure attack, managed with IOP-lowering medications. Visual acuity was hand movement with good light projection. Slit-lamp exam showed a fixed dilated pupil, iris atrophy, shallow anterior chamber, and hypermature cataract with phacodonesis. After successful continuous curvilinear capsulorhexis, a CTR was inserted to ensure capsular bag stability during the subsequent steps of lens removal. A slow Phaco Chop Technique was employed, followed by IOL implantation. Due to persistent mydriasis despite intracameral carbachol, pupilloplasty was performed using the Siepser sliding knot to restore a functional and centered pupil.

Results: The capsular bag remained stable throughout the procedure with no intraoperative complications. Postoperative evaluation revealed a best-corrected visual acuity of 20/20. Slit-lamp examination showed a round, centered pupil of more physiologic size and a well-positioned intraocular lens within the capsular bag.

Conclusions: In cases of hypermature cataract with zonular instability and residual mydriasis following resolved phacomorphic glaucoma, a combined approach with CTR insertion and Siepser pupilloplasty allows for safe phacoemulsification, structural support, and functional pupil reconstruction in a single operative session.

Abstract No.: 200878
Modified Canabrava Technique for Scleral Fixation in a Small Pupil Eye: A Surgical Video of 4-Flanged Intraocular Lens Implantation Post-Vitrectomy and Phacofragmentation in a 74-Year-Old Male with Surgical Aphakia

*First Author: Jay Marianito **VICENCIO***
*Co-Author(s): Joanna Mae **O'SANTOS***

Purpose: To demonstrate a modified 4-flanged intrascleral fixation technique based on the Canabrava method in a surgically aphakic eye with a small pupil, emphasizing intraoperative handling, suture passage, and IOL stability.

Methods: A 74-year-old male with a history of surgical aphakia underwent pars plana vitrectomy, phacofragmentation, and transscleral fixation of a 4-flanged intraocular lens using a modified Canabrava technique. Unlike the original approach where sutures were passed through the IOL haptics outside the eye, in this modified version, the IOL was first injected into the anterior chamber and positioned on top of the iris. 6-0 polypropylene sutures were then passed through the haptic eyelets under direct visualization. After securing each haptic, the IOL was carefully slid behind the iris into the posterior chamber. Anterior vitrectomy was done. The sutures were tightened, and flanges were created using thermocautery and subsequently buried in scleral pockets.

Results: The IOL was well-centered and stable with no intraoperative complications such as iris trauma or vitreous prolapse. Postoperative results demonstrated clear media, a quiet anterior chamber, and maintained IOL position.

The small pupil did not hinder visualization or technique execution.

Conclusions: This surgical video highlights a safe and efficient modification of the Canabrava 4-flanged fixation technique suitable for cases with small pupils. Injecting the IOL first allows controlled suture passage and improved handling, providing an alternative approach in challenging aphakic reconstructions.

Abstract No.: 200736
Navigating Complexities: Phacoemlsification in a Silicone Oil-Filled Eye

*First Author: Karen **CABRERA***
*Co-Author(s): Lorenz Jacob **MANGAHAS***

Purpose: To explore the complexities and challenges associated with performing cataract surgery on vitrectomized eyes that are filled with silicone oil, and to highlight the key considerations necessary for achieving successful surgical outcomes in these high-risk situations.

Methods: A descriptive and analytical review of the pre-, intra-, and postoperative challenges associated with cataract surgery in eyes filled with silicone oil following vitrectomy.

Results: The entry highlights several anatomical and physiological changes encountered in eyes filled with silicone oil, including the floatation effect of silicone oil, a shallower anterior chamber, bowing of the posterior capsule, the presence of emulsified oil and silicone globules, dense cataracts and synechiae, and non-dilating pupils. Additionally, it addresses common management strategies, such as leaving posterior capsular plaques in place and performing postoperative YAG capsulotomy when necessary. Although the insights provided are not based on a formal study, the discussion suggests that achieving successful outcomes in cataract surgery for these complex cases necessitates thorough surgical planning, awareness of altered intraocular dynamics, preparation for intraoperative complications like posterior capsular rupture, and tailored postoperative interventions, including YAG capsulotomy.

Conclusions: Cataract surgery in vitrectomized, silicone oil-filled eyes is highly complex and demands specialized surgical strategies due to anatomical changes and increased risk of complications. Understanding the behavior of silicone oil and its effects on ocular structures is essential for minimizing risks and improving patient outcomes.

Abstract No.: 200466
Navigating Intraoperative Floppy Iris Syndrome with Vertical Chop: A Cataract Case in a Tamsulosin User

*First Author: Alexander Joseph **REYES***
*Co-Author(s): Anselmo David **ULTRA***

Purpose: To demonstrate the use of vertical chop phacoemulsification in managing a dense cataract complicated by Intraoperative Floppy Iris Syndrome in a patient with chronic tamsulosin therapy.

Methods: A 62-year-old male presented with a 5-year history of progressive cloudy blurring of vision in the right eye, patient attempted to have spectacles updated but was not done due to suspected cataract, and was referred to the clinic for definitive evaluation. On preoperative examination, right eye visual acuity was 5/400. Slit lamp examination revealed a dense posterior subcapsular cataract (NO3NC3C2P4), clear cornea, deep anterior chamber. Pupil was 2mm, briskly reactive without RAPD. Left eye findings were unremarkable. Phacoemulsification was performed. While moderate dilation was noted at the beginning of the surgery, the patient presented with IFIS and decreasing pupil size during the surgery. Vertical chop technique was utilized, and no mechanical pupil expansion devices were used.

Results: The vase was completed uneventfully with in-the-bag IOL implantation. On postoperatve day 1, uncorrected visual acuity was 20/25 with a grade 2 anterior chamber reaction. By one month post-op, vision improved to 20/20 uncorrected with a quiet anterior segment.

Conclusions: This case highlights the utility of vertical chop in managing cases with small pupil

and IFIS without the need for pupil expansion devices. With stable chamber maintenance and careful technique, safe and effective outcomes can still be achieved in challenging intraoperative conditions.

Abstract No.: 201220
Polar Eclipse: Managing a Posterior Polar Cataract with Posterior Capsulorrhexis and IntheBag IOL with No Vitreous Loss

*First Author: Robert William **KING***
*Co-Author(s): Nikolai Thadeus **MAPPATAO***

Purpose: To describe a surgical approach for a suspicious Grade III posterior polar cataract that achieves controlled posterior capsulorrhexis while preserving the anterior hyaloid and preventing vitreous loss.

Methods: A 28yearold with Grade III posterior polar cataract and dense central nuclear opacity underwent phacoemulsification under lowflow, lowvacuum settings with careful viscoelastic use to maintain anterior chamber stability. A 5.0–5.5 mm continuous curvilinear capsulorhexis was created. Hydrodelineation was performed without hydrodissection or nucleus rotation. The endonucleus was gently prolapsed into the central safe zone and emulsified in a controlled fashion. Epinucleus and cortex were separated via viscodissection. The dense central plaque was managed with a planned posterior capsulorrhexis: the posterior capsule was punctured with a 27gauge needle, immediately followed by dispersive OVD injection into the Berger space to tamponade the vitreous. The rhexis was completed with microUtrata forceps under constant chamber maintenance with OVD. A onepiece posterior chamber IOL was implanted directly inthebag deliberately avoiding irrigation and aspiration behind the IOL. Carbachol and a preservative-free antibiotic was given intracamerally.

Results: The procedure was completed without vitreous prolapse or anterior hyaloid breach. Postoperatively, the posterior capsulorhexis was stable, the IOL was wellcentered, and the anterior hyaloid remained intact. At day 7, BCVA was 20/50, limited by probable sensory deprivation amblyopia.

Conclusions: Planned posterior continuous curvilinear capsulorrhexis, meticulous anterior chamber control, and OVDassisted vitreous tamponade allow safe removal of posterior polar cataracts while preserving anterior hyaloid integrity and preventing vitreous loss.

Abstract No.: 201324
Redemption for the submerged: Refixation of subluxated/dislocated IOL bag complexes

*First Author: Nagesha **C K***
*Co-Author(s): Shreya **ANGRISH***

Purpose: In an era of sutureless, glueless and effortless scleral fixation surgeries, the need for IOL rescue may seem minimal. However, surgical expertise thrives on versatility and the challenge of salvaging dislocated IOL bag complexes remains a valuable pursuit. This video series presents a collection of surgical interventions designed to rescue and refixate subluxated and dislocated IOL bag complexes.

Methods: Five different cases of subluxated and dislocated IOL bag complexes were taken. Each case with variable IOL designs was handled uniquely. DUal haptic partially subluxated IOL bag complex was refixed using 9-0 prolene suture via 8 exit four-point fixation technique. In case of three-piece foldable IOL, bag was refixed using 2-point fixation via 9-0 prolene sutures. A vertically dislocated IOL bag complex was refixated using pierce technique by 9-0 prolene sutures. Grossly subluxated acrysos A-60 iol bag was repositioned using gortex sutures. Subluxated single- piece IOL bag was brought back home with gortex sutures via pierce technique.

Results: Good anatomical refixation, adequate vaulting, acceptable decentration and tilt of IOL with no complications are all a testament to the refixation surgical techniques.

Conclusions: Refixation surgeries are a non invasive cost effective technique for restoring subluxated/dislocated IOL bag complexes with non-inferior visual outcomes with an advantage of versatility to fix various IOL designs.

Abstract No.: 201367
SEQUENTIAL SURGERY: EDTA CHELATION & PHACOEMULSIFICATION

First Author: Raymond Nelson ***REGALADO***
Co-Author(s): Marianne Aira ***PAED***

Purpose: THIS SERVES TO SHOW THE AUDIENCE THAT EDTA CHELATION FOR BAND KERATOPATHY AND PHACOEMULSIFICATION CAN BE DONE IN ONE SITTING. THIS WILL AID IN VISUALIZATION DURING PHACOEMULSIFICATION

Methods: A 16yo FEMALE PT WITH CONGENITAL CATARACT AND BAND KERATOPATHY ON RIGHT EYE WAS SUBJECTED TO EDTA CHELATION FOLLOWED BY PHACOEMULSIFICATION,IN ONE SITTING.

Results: THE VISION IMPROVED TO 20/50 FROM HAND MOVEMENT. CORNEA IS CLEAR.

Conclusions: WE CAN CONCLUDE THAT DOING EDTA CHELATION FOR BAND KERATOPATHY, PRIOR TO CATARACT SURGERY IS ESSENTIAL IN PROVIDING GOOD VISUALIZATION SPECIALLY IF IT INVOLVES THE CENTRAL PART OF THE CORNEA.

Abstract No.: 201322
Safe and Not Sorry: Phacoemulsification using Vertical Chop in an Angle Closure Glaucoma Patient from a Beginning Cataract Surgeon

First Author: Alexander ***REYES***
Co-Author(s): Dillon Edric ***GO***

Purpose: The vertical chop is a phacoemulsification technique not widely used in the Philippines. It involves embedding your phaco probe into the cataract nucleus and using a chopper with a pointed tip to penetrate the nucleus vertically toward the probe tip and spreading the instruments apart to create nuclear hemispheres. This technique offers several advantages, like limiting your chopper within the confines of the capsulorhexis which reduces the risk of posterior capsule damage, and better penetration of dense cataracts with a pointed chopper causing less abrupt movements of the lens while chopping.

Methods: The patient presents with an NO3NC3C0P0 cataract on the right eye and history of angle closure glaucoma and YAG-LI. Visual acuity of the patient was at 20/80 without correction, improving to 20/60. Maximum dilation was 6mm. Anterior chamber depth was at 2.31mm, which is below average. Phacoemulsification was planned with using vertical chop due to suboptimal dilation. Standard phacoemulsification procedure was followed. On phacoemulsification proper, the nucleus was separated using vertical chop into 6 hemispheres without any resistance. The rest of the cataract removal proceeded without any untoward events and an intraocular lens was implanted.

Results: Visual acuity of the patient 1 day post-operation was at 20/20-2. Despite a shallow anterior chamber, no corneal edema was observed. Rest of the post-operative physical examination was normal.

Conclusions: Vertical chop is a safe and efficient technique in phacoemulsification and should be included in a cataract surgeon's arsenal, especially in cases of suboptimal dilation.

Abstract No.: 201297
The Obscured Snap Sign A Case Report of Posterior Capsular Rent Masked by Iris Hooks during Phacoemulsification in an Eye with a History of Vitrectomy with Silicone Oil and Trabeculectomy

First Author: Kevin Jake ***LOMIBAO***

Purpose: To present a unique surgical complication where a subtle "snap sign" of posterior capsular rupture was obscured by iris hooks during phacoemulsification. The patient had a complex history of Proliferative Diabetic Retinopathy, Neovascular Glaucoma, and a prior vitrectomy with silicone oil and trabeculectomy, which made the posterior capsule highly fragile.d.

Methods: A phacoemulsification was performed on a constricted pupil. After

performing synechiolysis and using iris hooks for retraction, a capsulorhexis was completed. During hydrodissection, a subtle "snap sign" indicated a posterior capsular rupture, leading to a nuclear fragment falling into the vitreous. The surgical plan was adapted: leaking silicone oil and cortical material were aspirated, and a sulcus intraocular lens (IOL) was placed for stable long-term fixation.

Results: The video demonstrates the easily missed "snap sign," which was masked by the tension created by the iris hooks. The patient's extensive surgical history compromised the integrity of the posterior capsule, making it highly susceptible to rupture. The case highlights the successful management of the complication, including aspiration of the leaking silicone oil and the placement of a sulcus IOL.

Conclusions: This case underscores a critical lesson for surgeons: iris hooks can inadvertently obscure important intraoperative signs. In complex, high-risk eyes with a history of vitrectomy and silicone oil, a low threshold for suspicion of complications is crucial. This case, though a complication, offers a valuable learning opportunity, emphasizing the need for surgical adaptability to ensure the best possible outcomes.

Abstract No.: 201112
Toric Intraocular Lens Implantation in a Patient with Longstanding Partially Resorbed Morgagnian Cataract

First Author: Jay Marianito ***VICENCIO***
Co-Author(s): Alyssa Marie ***HIZON***

Purpose: This video demonstrates the surgical management of a longstanding, partially resorbed Morgagnian cataract in a 49-year-old male, highlighting challenges such as white cataract, intraoperative capsular adhesions, and the implantation of a toric intraocular lens (IOL) into a fibrotic capsular bag. The procedure aimed to correct corneal astigmatism and restore optimal vision.

Methods: Initially, the standard cataract surgery steps were followed. The anterior capsule was found to be adherent to the cataract nucleus, a characteristic feature of longstanding Morgagnian cataracts. A continuous curvilinear capsulorhexis (CCC) was performed using microscissors and Utrata forceps. Due to the soft consistency of the cataract, aspiration of the lens material was employed as an alternative to phacoemulsification. Preoperative measurements revealed high corneal astigmatism, and consequently, a toric intraocular lens (IOL) was selected.

Results: The surgery was completed successfully without complications, and the capsule remained stable. Postoperatively, the patient's visual acuity improved significantly, from hand movement to 20/20, with enhanced visual function. No major postoperative complications occurred.

Conclusions: Toric IOL implantation in cases of longstanding Morgagnian cataracts with capsular adhesions is feasible with careful surgical planning and technique. The use of microscissors and Utrata forceps can be effectively combined to maintain a continuous curvilinear capsulorhexis, even in the presence of an adherent capsule. This allows for a stable rhexis crucial for securing the toric IOL in place. This case highlights the importance of an individualized surgical approach in managing complex cataract cases.

Abstract No.: 200785
WHEN THE CANNULA POPS: MANAGING AN ARGENTINIAN FLAG SIGN WITH SUPRACAPSULAR PHACOEMULSIFICATION

First Author: Pauline Gabrielle ***LACSAMANA***

Purpose: To demonstrate the surgical management of a nucleo-cortical cataract complicated by an anterior capsular tear and early Argentinian flag sign following cannula ejection, highlighting the importance of tailored techniques such as anteriorization of lens nucleus and supracapsular phacoemulsification to achieve a successful outcome.

Methods: This case involves a mature nucleo-cortical cataract complicated by a sudden anterior capsular nick resulting from inadvertent cannula ejection during viscoelastic

injection. Early features of an Argentinian flag sign were then observed. A bent needle cystotome was utilized to fashion a flap from the tear, allowing re-initiation and completion of the capsulorrhexis with Utrata forceps. Hydrodissection was intentionally avoided to prevent further capsular extension. Instead, hydrodelineation was carefully performed, and the nucleus was mechanically anteriorized using a chopper. Supracapsular phacoemulsification was carried out in the anterior chamber, reducing stress on the compromised capsular bag. A foldable intraocular lens was successfully implanted within the capsular bag, with gentle rotation of the trailing haptic to achieve proper positioning and stability.

Results: The capsulorrhexis was successfully completed despite the initial tear, and phacoemulsification was performed without further capsular extension. The IOL was securely placed within the bag, and no intraoperative or postoperative complications were observed.

Conclusions: Even in the presence of an anterior capsular tear and early Argentinian flag sign, meticulous surgical planning and techniques - particularly careful instrument handling, judicious use of ophthalmic viscosurgical device, avoidance of hydrodissection, and the application of supracapsular phacoemulsification, are critical in preserving capsular integrity and achieving a successful surgical outcome.

Abstract No.: 201165
Walking on Thin Ice: Navigating Posterior Polar Cataracts

*First Author: Pauline Gabrielle **LACSAMANA***

Purpose: To demonstrate a safe and effective phacoemulsification technique for managing a posterior polar cataract, emphasizing strategies to prevent posterior capsular rupture and highlighting intraoperative pearls for successful surgical outcomes.

Methods: This video demonstrates the phacoemulsification of a posterior polar cataract with emphasis on techniques to minimize posterior capsule stress. A continuous curvilinear capsulorhexis was performed, followed by hydrodelineation only, avoiding hydrodissection. Nuclear rotation was omitted to prevent capsular stress. The nucleus was carefully debulked and anteriorized, allowing supracapsular emulsification using low phaco parameters. Capsular bag inflation was maintained throughout the case with cohesive viscoelastic to prevent chamber collapse. Care was taken to fill the anterior chamber with viscoelastic before withdrawing the phaco tip, to avoid sudden decompression and potential posterior capsule rupture. Cortical removal was performed with low vacuum and gentle aspiration, avoiding traction on the capsule. A foldable intraocular lens was implanted in the bag, and the case was completed without complications. This approach highlights key safety modifications in managing posterior polar cataracts.

Results: The procedure was successfully completed without posterior capsule rupture or vitreous loss. Chamber stability was maintained throughout by careful viscoelastic use and controlled phacoemulsification parameters. The posterior capsule remained intact, and a foldable intraocular lens was implanted securely within the capsular bag. Postoperative recovery was unremarkable, with the patient achieving best-corrected visual acuity of 20/25 on postoperative day 1.

Conclusions: This case highlights the effectiveness of a no-rotation, no-hydrodissection approach, combined with chamber stability techniques, in safely managing posterior polar cataracts.

Abstract No.: 200875
Wrong Plane, Right Outcome: Stable Single Piece IOL Inserted Under The Bag After Unrecognized Posterior Capsular Rent

*First Author: Reginald Robert **TAN***
*Co-Author(s): Joanna Mae **O'SANTOS***

Purpose: To present a surgical video highlighting an unrecognized posterior capsular rent (PCR) mistaken for residual cortex, resulting in unintended placement of a single-piece

IOL in a compromised capsular bag, and the unexpectedly favorable outcome that followed.

Methods: During routine phacoemulsification, the surgeon encountered what was presumed to be residual cortex. Triamcinolone staining revealed no vitreous prolapse into the anterior chamber. Believing the capsule to be intact, a single-piece IOL was implanted into the capsular bag. Upon rotation for final positioning, part of the optic slipped beneath the posterior capsule while the haptics remained in the bag. The lens appeared stable and well-centered intraoperatively. Postoperative evaluation included serial visual acuity checks and ultrasound biomicroscopy (UBM) to confirm IOL position.

Results: On postoperative day 1, the patient achieved a best-corrected visual acuity (BCVA) of 20/25, improving to 20/20-2 by week 6. Ultrasound biomicroscopy confirmed that both haptics remained within the capsular bag, while a portion of the optic was captured beneath the posterior rent and resting above the vitreous. No signs of vitreous disturbance, inflammation, or IOL decentration were noted.

Conclusions: This case illustrates that, even in the setting of an unrecognized PCR, a stable and visually successful outcome may still occur. The video underscores the importance of careful intraoperative assessment and highlights the eye's capacity to tolerate certain anatomic variations post-surgery without compromising visual recovery.

Abstract No.: 200315
Zero Flags, Zero Tears: Brazilian Technique for Safer White Cataracts

*First Author: Reginald **TAN***
*Co-Author(s): Raphael **GUMAFELIX***

Purpose: To report the surgical management of an intumescent white cataract using controlled decompression to prevent radial capsular tears and the Argentinean flag sign.

Methods: A 61-year-old female presented with bilateral blurring of vision, more pronounced in the right eye. She had no history of hypertension or diabetes. Visual acuity was 20/666 at 1 meter unaided, and 20/666 with -4.00 sph correction in the right eye. Slit-lamp examination showed a clear cornea, a formed anterior chamber with central shallowing, and a swollen, white, opaque lens suggestive of a mature intumescent cataract. Specular microscopy demonstrated normal endothelial cell count and morphology, indicating good surgical candidacy.

Results: A central puncture of the anterior capsule was created via a side port to equalize pressure between the anterior intralenticular compartment and the anterior chamber, allowing the milky liquefied cortex to egress. A controlled mini-capsulorhexis was performed while maintaining anterior chamber stability to prevent radial extension of the tear. Hydrodissection was deliberately avoided: first, because the nucleus was already loose; and second, to prevent sudden posterior capsule blow-out, which may occur due to increased volume in a distended posterior compartment. Controlled decompression of the posterior intralenticular space was achieved via bimanual irrigation/aspiration, facilitating the release of trapped fluid and cortical debris. After pressure normalization, cataract removal proceeded uneventfully.

Conclusions: In intumescent cataracts, avoiding hydrodissection and employing staged decompression with mini-capsulorhexis and posterior fluid release effectively minimizes the risk of the Argentinean flag sign and other intraoperative complications.

Abstract No.: 200398
"Into the Unknown": Managing a case of Lens-induced Vitritis in a Patient with congenital Ectopia Lentis et Pupillae

*First Author: Daniel **MENDOZA***
*Co-Author(s): Julianne Nicole **CHAM***

Purpose: To highlight the case of lens-induced vitritis on a patient with Congenital ectopia lentis-et pupillae, our management, operative technique, and intraoperative findings.

Methods: We report a case of a 43 year old male who presented with ectopia lentis

et pupillae with lens-induced vitritis. The patient underwent pupiloplasty with pars plana vitrectomy and phacofragmentation. Pupilloplasty was done using the vitrectomy probe, from the inferonasally located slit-like pupil, creating a 3mm circular pupil. Iris hooks were placed to increase pupil size. The vitrectomy probe was used to clean up cortical material and to do core vitrectomy, assuring release of traction from the hanging cataract. The fragmatome was used to complete phacofragmentation. Intraoperative findings showed a myopic fundus with staphyloma, multiple round holes without retinal detachment. Barricade endolaser was done surrounding the holes.. The patient was left aphakic since the minimum white-to-white distance should be 9mm and his was measured to be 8.5x8mm.

Results: Successful creation of a pupil was done with the use of a vitrector. The dislocated cataract and the vitritis were both successfully addressed as well. Post-operatively, favorable results were seen with improved visual acuity with a clear medium and attached retina posteriorly.

Conclusions: This abstract highlights our management in a rare and unique case and it was through proper surgical planning that not only was a pupil created successfully, but the lens-induced vitritis also addressed. Further studies are warranted to find better and more creative ways on creating a pupil in similar cases.

Cornea & ED

Abstract No.: 201183
Managing Corneal Melt: Keratoprosthesis Removal and Tectonic Penetrating Keratoplasty in Ocular Stevens-Johnson Syndrome

First Author: Reginald Robert ***TAN***
Co-Author(s): Pauline Gabrielle ***LACSAMANA***

Purpose: This video demonstrates the surgical technique for explantation of a keratoprosthesis with simultaneous tectonic penetrating keratoplasty (PKP) in a patient with Stevens-Johnson Syndrome (SJS), addressing the challenges of severe ocular surface disease and corneal melt, and highlighting strategies to restore globe integrity.

Methods: A previously placed temporary tarsorrhaphy was released to expose the globe. After ocular surface assessment, a Flieringa ring was sutured to the sclera for globe stabilization. The keratoprosthesis was carefully dissected and explanted, preserving viable host tissue. A donor corneal button was placed and anchored with four cardinal 10-0 nylon sutures, followed by interrupted sutures to complete the closure. Knots were rotated and buried to minimize irritation. The anterior chamber was reformed and the wound checked for watertightness. A partial tarsorrhaphy was reapplied to protect the graft postoperatively.

Results: The procedure was completed without complication. The graft was tectonically stable, the anterior chamber was well-formed, and the globe maintained structural integrity. Follow-up showed a clear graft without leak or infection. While visual recovery was limited by underlying ocular disease, the globe was anatomically preserved and corneal melt progression halted.

Conclusions: Keratoprosthesis explantation with simultaneous tectonic penetrating keratoplasty is a viable globe-saving procedure in cases of corneal melt and graft failure, particularly in high-risk ocular surface disease such as Stevens-Johnson Syndrome. Timely surgical intervention, combined with globe stabilization using a Flieringa ring and postoperative surface protection with tarsorrhaphy, can successfully restore structural integrity and preserve the eye for future rehabilitation.

Abstract No.: 200879
Trocar-Assisted Four-Point Transscleral Ab Externo Fixation of an Intraocular Lens

First Author: Reginal Robert ***TAN***
Co-Author(s): Raphael ***GUMAFELIX***

Purpose: To present a unique case of complex secondary intraocular lens (IOL) implantation

involving four-point transscleral fixation of an Akreos lens with 9-0 Prolene sutures, performed via a trocar-assisted ab externo approach in an eye with prior penetrating keratoplasty.

Methods: A 54-year-old female with a history of corneal decompensation secondary to recurrent herpes simplex keratitis, status post penetrating keratoplasty and cataract extraction in the right eye, underwent a combined procedure consisting of pars plana vitrectomy, glaucoma drainage device implantation, and four-point transscleral fixation of an Akreos IOL using 9-0 Prolene. Three 23-gauge trocar cannulas were inserted 3 mm posterior to the limbus for posterior segment access. Following vitrectomy, the same trocar ports were utilized to retrieve the Prolene sutures internally with microforceps. Sutures were passed ab externo and looped through each of the four haptic eyelets.
To achieve a more myopic postoperative refraction, a +1.50 diopter adjustment was added to the original +1.00 D target. A +26.0 D Akreos lens was fixated 3 mm posterior to the limbus to optimize effective lens position.

Results: The IOL remained well-centered and stable postoperatively. Uncorrected visual acuity improved to 20/50, with BCVA reaching 20/30. The corneal graft remained clear, and intraocular pressure was well controlled with topical medications.

Conclusions: This case highlights successful trocar-assisted ab externo four-point Akreos fixation in a graft-dependent eye, offering an effective solution for complex secondary IOL implantation requiring combined anterior and posterior segment surgery.

Glaucoma

Abstract No.: 201364
360° Ab Externo Suture Trabeculotomy in a Patient with Primary Congenital Glaucoma

*First Author: Aleena Gayl **ESPINOSA***

Purpose: To present a surgical video using an angle surgery technique in managing primary congenital glaucoma in a patient presenting with buphthalmos and hazy cornea

Methods: This video is a recording of the actual surgery

Results: Sufficient intraocular pressure control was achieved with no additional IOP lowering medication or procedures done after the initial surgery

Conclusions: 360° Ab Externo Suture Trabeculotomy is an effective, safe, and medication saving surgical treatment for primary congenital glaucoma patients

Abstract No.: 201352
Ahmed Valve Implantation with Partial Tube Ligation in a Pediatric Patient with Secondary Open Angle Glaucoma from Sturge-Weber Syndrome

*First Author: Alyssa Louise **PEJANA-PAULINO***
*Co-Author(s): George Michael **SOSUAN***

Purpose: To demonstrate the surgical technique of Ahmed valve implantation with partial tube ligation in a pediatric patient with Sturge-Weber Syndrome (SWS) and severe secondary open-angle glaucoma, aiming to reduce the risk of early postoperative hypotony.

Methods: This surgical video illustrates the implantation of an Ahmed FP7 glaucoma drainage device in a pediatric eye, with a key modification, which is the partial ligation of the tube using 7-0 Vicryl to restrict early aqueous flow. The procedure is shown in its entirety. Initial steps include peritomy, positioning of the plate 8 mm posterior to the limbus, and scleral fixation of the plate with 10-0 Nylon. Partial occlusion is achieved by inserting a 5-0 Prolene suture into the tube lumen, followed by ligation with 7-0 Vicryl. The tube is trimmed bevel-up, inserted through a 23-gauge needle tract into the anterior chamber, and secured with a mattress suture. Conjunctival closure is completed with multiple 10-0 Nylon sutures.

Results: The surgical video provides clear visualization of critical steps, highlighting modification of surgical techniques tailored to pediatric patients with high episcleral venous

pressure. No intraoperative complications occurred. Postoperative IOP was stable without early hypotony, and the eye maintained a well-formed anterior chamber.

Conclusions: Ahmed valve implantation with partial tube ligation is a safe and effective surgical modification for managing refractory pediatric glaucoma in patients with SWS. This technique minimizes early hypotony risk while maintaining the long-term pressure-lowering benefits of the drainage device.

Abstract No.: 200361
Conjunctival Patch Graft for Overfiltration Management in Neovascular Glaucoma Surgery: A Resource-Limited Approach to Post-Trabeculectomy Complications

*First Author: Rainier **COVAR***
*Co-Author(s): Irene **FELARCA**, James Paul **GOMEZ**, Patricia Abigail **LIM**, Maria Imelda **VELOSO***

Purpose: This case report highlights the surgical management of a 74-year-old female with neovascular glaucoma (NVG) secondary to central retinal vein occlusion (CRVO) in the right eye, who developed complications following trabeculectomy. The focus is on the use of a conjunctival patch graft as an alternative solution in a resource-limited setting.

Methods: The patient had a history of drusen, pseudophakia, and sensory exotropia, and underwent trabeculectomy after declining a glaucoma drainage device (GDD) due to financial constraints. Preoperative anti-VEGF was administered. Although the surgery was initially uncomplicated, a thin scleral flap was noted. On postoperative day 7, the patient experienced vision loss and hypotony (IOP 3 mmHg). B-scan showed kissing choroidals and a shallow anterior chamber, prompting emergency surgical intervention for external drainage and trabeculectomy revision.

Results: Intraoperatively, overfiltration was evident with aqueous gushing from scleral flap margins and buttonholes. Attempts to suture the flap failed to achieve a watertight seal. With no scleral or amniotic grafts available, a conjunctival patch graft was utilized. Post-surgical outcomes included resolution of choroidal effusions, restoration of anterior chamber depth, and sustained IOP control. The bleb remained elevated and non-leaking, with no further complications noted on follow-up.

Conclusions: This case demonstrates the effectiveness of a conjunctival patch graft in sealing scleral flap leaks in the absence of conventional graft materials. It underscores the importance of surgical adaptability and provides a viable alternative for managing postoperative complications in resource-limited environments.

Abstract No.: 201005
Glaucoma Drainage Device Plate Migration and Exposure in a case of Neovascular Glaucoma

*First Author: Maria Hannah **DE GUZMAN***
*Co-Author(s): Hendrik **ONSON***

Purpose: To report a case and management of a glaucoma drainage device (GDD) implant exposure in a case of neovascular glaucoma (NVG)

Methods: Case of a 63 year old female with an exposed GDD plate managed with GDD explantation and trabeculectomy

Results: A 63 year old female presented with a GDD (Ahmed valve) plate migration and exposure on the right eye (OD). Examination of OD revealed a visual acuity (VA) of 20/80, deep anterior chamber, exposed plate, leaking aqueous flow on dehisced superotemporal conjunctiva, tube seen on anterior chamber, ending behind the iris, pseudophakic, intraocular pressure (IOP) of 2. There were no noted iris neovascularization. Examination of the angles revealed peripheral anterior synechiae 360 degrees. Fundus exam revealed cup to disk ratio (CDR) of 0.7, thin superior and inferior neuroretinal rim, laser marks, dot and blot hemorrhages. Examination of OS revealed VA of 20/50 with an IOP of 20. Angles are open to ciliary body band with areas of regressed angle neovascularization. Fundus revealed CDR of 0.8, thin superior and inferior neuroretinal

rim, laser marks, dot and blot hemorrhages. The superonasal conjunctiva on OD appears mobile. Patient underwent explantation of the glaucoma drainage device implant of OD, trabeculectomy with 30 microgram mitomycin-C, and conjunctival transposition. An intraocular pressure of 10 was achieved on OD at 3 month post-operatively.

Conclusions: Trabeculectomy with mitomycin-C may be an option after GDD on selected cases with areas of preserved conjunctiva on an inactive neovascular glaucoma.

Abstract No.: 200320
Managing Large Cyclodialysis Cleft

*First Author: Manisha **AGARWAL***

Purpose: To evaluate the sewing machine technique for the management of Large Cyclodialysis Clefts

Methods: A 14 year old boy with diminution of vision in the right eye to 6/24,N24 following an injury with a badminton racket 4 months back. The applanation tonometry recorded an IOP of 2 mm of Hg in the right eye. There was a subluxated lens with an evidence of 360 degree cyclodialysis cleft on gonioscopy. There was hypotonus maculopathy with a hyperemic swollen disc. The boy underwent pars plana lensectomy and anterior vitrectomy and intraoperative gonioscopy to confirm the extent of the cyclodialysis cleft. This was followed by the sewing machine technique of repairing the cyclodialysis cleft using a 26 gauge needle,30 gauge needle and 10-0 prolene suture. Follow up at 12 weeks the IOP was 18 mm of Hg and the best corrected visual acuity was 6/9,N6 with +11 D sphere correction.

Results: Sewing machine technique helped to close the large cyclodialysis cleft and improved the IOP and BCVA

Conclusions: Sewing machine technique is a useful technique to close large cyclodialysis cleft theerby helping in visual improvemnt and building up IOP

Abstract No.: 201368
Preserflo™ MicroShunt insertion with Intraluminal Ripcord Suture Combined with Phacoemulsification

*First Author: Aleena Gayl **ESPINOSA***

Purpose: To present a surgical video on a modified bleb forming surgical technique in managing primary open angle glaucoma and cataract in a myopic patient presenting with blurred vision and high intraocular pressure with a high risk of hypotony

Methods: The video is a recording of the actual surgery

Results: Improved visual actuity sufficient intraocular pressure control was achieved with no episodes of hypotony on the postoperative period

Conclusions: Preserflo™ MicroShunt insertion with Intraluminal Ripcord Suture Combined with Phacoemulsification is an effective, safe, and medication saving surgical treatment in primary open angle glaucoma patients with dense cataract and a high risk of hypotony

Orbital and Oculoplastic Surgery

Abstract No.: 201101
Repair of Congenital Upper Lid Coloboma using Direct Closure and Tenzel Semicircular Flap

*First Author: Marco **TUMALAD***
*Co-Author(s): Miguel Eduardo **JARABELO***

Purpose: To present a surgical video on a technique in repairing a congenital upper lid coloboma using a sliding flap.

Methods: This is a video recording of the actual surgery.

Results: Successful closure with no tension was achieved using this technique and the goal of protecting the globe was attained.

Conclusions: Tenzel Semicircular flap is a good option in repairing a large upper lid coloboma.

Abstract No.: 200619
Slip 'n Slide: Orbital Socket Reconstruction with Mucus Membrane Graft using Draw-String Technique

First Author: Franklin ***KLEINER***
Co-Author(s): Emanuele Maria Alfonso ***ECHEVARRIA***

Purpose: To illustrate a method of orbital socket reconstruction using mucus membrane graft without the need for skin bolsters.

Methods: A 40-year-old Filipino male presented with a contracted socket of the right eye after enucleation was done 24 years prior. Inferior fornix reconstruction was performed in the following manner: Horizontal incision was made along bulbar conjunctiva from medial to lateral canthus. Dissection was performed inferiorly to expose the orbital rim. Mucus membrane graft was then obtained from lower lip mucosa. The superior edge of the graft was sutured to the superior edge of bulbar conjunctiva. The inferior edge of the graft was fixed to the inferior orbital rim together with the edge of palpebral conjunctiva using a double armed 5-0 vicryl suture passed continuously along the orbital rim. The two ends of the suture were pulled in opposite directions similar to that of a draw-string to allow the graft to fall into place while creating a deep inferior fornix.

Results: This technique gives the appearance of a deeper than normal fornix which can be addressed with a customized prosthesis.

Conclusions: The draw-string technique is a straightforward and cosmetically acceptable method of socket reconstruction without the need for a bolster on the skin.

RRPC FRPC

RESIDENTS' RESEARCH CONTEST

BASIC CATEGORY

RRPC-0004 (as Oral Presentation) Netarsudil 0.02% (Rho-Kinase Inhibitor) Administration in Preventing Retinal Ganglion Cell Death Caused by Ethambutol-Induced Toxic Optic Neuropathy among Wistar Rats Model: An Animal Study

First Author: Raphael ***GUMAFELIX***
Co-author/s: Marianne ***CARABEO***
Institution: Saint Luke's Medical Center

Purpose: Ethambutol, a frontline drug for tuberculosis, is associated with toxic optic neuropathy (ETON), primarily affecting retinal ganglion cells (RGCs). Its pathogenesis is multifactorial, involving mitochondrial dysfunction, zinc chelation, and oxidative stress. Despite its clinical burden, no proven therapy exists to prevent or reverse neuronal damage once established. Netarsudil, a Rho-kinase (ROCK) inhibitor approved for glaucoma, has shown neuroprotective effects in experimental models of optic nerve injury. The present study aimed to determine whether topical Netarsudil 0.02% could protect RGCs in an ethambutol-induced optic neuropathy rat model by comparing RGC thickness and density among treated and untreated groups.

Methods: This randomized controlled animal trial was conducted using 15 healthy male Wistar rats (8–10 weeks old, 200–300 g). After acclimatization, rats were randomized into three groups (n = 5 per group): Group A (negative control), received distilled water and saline eye drops; Group B (positive control), received oral ethambutol 35 mg/kg/day with saline drops; and Group C (treatment), received oral ethambutol at the same dose plus Netarsudil 0.02% ophthalmic solution instilled three times daily. After 30 days, rats were anesthetized, both eyes enucleated, and tissues preserved in Davidson's fixative before paraffin embedding and H&E staining. Histopathological assessment focused on RGC layer thickness (μm) and density (cells/mm²). A blinded veterinary pathologist performed all measurements under 400x magnification.

Results: All 15 rats completed the study without morbidity or mortality. Histopathology confirmed ethambutol-induced RGC damage characterized by cytoplasmic vacuolization and structural disruption. Mean RGC thickness was lowest in Group A (21.89 ± 0.14 μm), highest in Group B (27.21 ± 0.13 μm), and intermediate in Group C (23.99 ± 0.28 μm).

Conclusion: Topical Netarsudil 0.02% demonstrated measurable neuroprotective effects on retinal ganglion cells in a Wistar rat model of ethambutol-induced optic neuropathy. Treatment mitigated ethambutol-associated vacuolization, reduced abnormal RGC thickening, and preserved cell density. These findings are consistent with prior evidence that ROCK inhibition can attenuate apoptosis, stabilize mitochondrial function, and suppress oxidative stress. Although limited by reliance on histopathological outcomes without molecular or functional correlates, this study highlights Netarsudil's potential as an adjunctive therapy for preventing ETON. Future investigations with larger cohorts, dose-response analyses, and molecular assays of apoptotic and autophagy markers are warranted to further validate these neuroprotective effects and clarify underlying mechanisms.

RRPC-0008 (as Oral Presentation)
Comparison of Postoperative Vault After Using a White to White-Based Nomogram Versus a UBM-based Nomogram in Calculating the ICL Size

First Author: Cesar Emmanuel R. ***GLIPO***
Co-author/s: Robert Edward T. ***ANG****, Gladness Henna* ***A.MARTINEZ****, Zoe M.* ***DOROY****, Roquito Jose M.* ***YUTANGCO***
Institution: Cardinal Santos Medical Center

Purpose: To compare the effectiveness of an ultrasound biomicroscopy (UBM)–based nomogram with a white-to-white (WTW) nomogram in predicting postoperative vault in myopic patients undergoing implantable collamer lens (ICL) implantation.

Methods: This retrospective, single-center study included 227 eyes from 116 myopic patients (mean age 28.9 ± 7.3 years). ICL sizing was determined using either the WTW nomogram (WTW group, 117 eyes, 60 patients) or the UBM nomogram (UBM group, 110 eyes, 56 patients). Postoperative evaluation at 1 month included uncorrected and corrected visual acuity, refraction, anterior chamber depth, axial length, intraocular pressure, and vault.

Results: Mean vault differed significantly between groups. The UBM group showed a lower average vault (472.3 ± 170.0 µm) compared with the WTW group (560.4 ± 251.7 µm)

Conclusion: Visual and refractive outcomes were similarly good in both the WTW group and the UBM group. While the mean postoperative vaults were similar, there were more eyes in the UBM group within the ideal vault range. More incidence of overvaults in the WTW group resulted in more ICL exchanges.

RRPC-0014 (as Oral Presentation)
High-Intensity Focused Ultrasound (HIFU) Induced Ocular Changes on Ex Vivo Porcine Eyes: An Experimental Pilot Study

First Author: Angeline Edrielle M. ***PACIO***
Co-author/s:Edgar Felipe U. ***LEUENBERGER*** *, James Paul S.* ***GOMEZ***
Institution: University of the East Ramon Magsaysay Medical Center

Purpose: Due to the widespread use of High-Intensity Focused Ultrasound (HIFU) in facial cosmetic procedures, this study investigated the potential of HIFU energies to induce immediate lens opacification and other ocular changes in ex vivo porcine eyes.

Methods: Freshly slaughtered ex vivo porcine eyes devoid of any gross ocular lesions and signs of trauma, with clear crystalline lenses, were assigned into four groups and received increments of ultrasound power as follows: Group A: sham, Group B: 1.20J, Group C: 1.60J, Group D: 2.00J. All groups received 75 shots using a 4.0 - 4.5mm depth probe of the (HIFU) V-Max machine (Astiland Medical Aesthetics Technology Co., Hunan, China), administered by a trained aesthetician. Two masked, experienced observers assessed porcine lens clarity and other ocular changes. Data was analysed using descriptive statistics via Kruskal Wallis One-Way ANOVA.

Results: Sixteen eyes were included in the study. A dose-dependent increase in the incidence of corneal opacity, iris changes, focal lens opacities, and pigment deposition were noted following application of increasing HIFU energies. However, there were no significant statistical differences in the development of lens opacities noted in Groups A, B, C, and D, (p-value=0.1333) due to the corneal opacities seen with increasing HIFU energies that posed as a hindrance to accurate grading of lens changes.

Conclusion: This experimental pilot study demonstrates that acute ocular changes in ex vivo porcine eyes can occur even at baseline HIFU energy settings. These changes include corneal opacification, iris discoloration, anterior lens capsule pigment deposits, and

lens changes. Caution is suggested while applying HIFU energy around areas of thin skin (e.g.: eyelid). The use of recommended techniques may reduce the risk of inadvertent displacement of HIFU energy towards the orbital tissue. Furthermore, future studies referencing histopathologic changes will further elucidate HIFU damage at the cellular level.

RRPC-0016 (as Oral Presentation) Clinico-Demographic Characteristics of Patients with Optical Coherence Tomography Detected Macular Thickening and Thinning in a Level Three Private Hospital

First Author: Eric Nathaniel M. ***REYES***
Co-author/s: Carlo S. ***LADORES***
Institution: University of Santo Tomas

Purpose: This study aims to analyze the clinico-demographic characteristics associated with OCT-detected macular thickening and thinning among Filipinos in a tertiary hospital in Manila.

Methods:A retrospective observational study was conducted using OCT macular scans and corresponding medical records of patients at the University of Santo Tomas Hospital from January 2022 to December 2024. A minimum sample size of 84 patients was calculated. Descriptive and inferential statistical analyses, including t-tests, ANOVA, multiple linear regression, and correlation analysis, was used to determine associations between macular thickness and demographic/clinical variables.

Results: Sex showed a significant difference in distribution, with thinning more common among females and thickening more common among males ($\chi^2 = 4.268$, p 0.05). ANOVA showed that LogMAR differed (p 0.05) and IOP ($p > 0.05$) did not; group means by age bracket were not present in the output.

Conclusion: Macular thinning is the more common OCT phenotype in a Filipino tertiary population and that it carries functional consequences, particularly in women and in patients with cardiovascular disease. Thickening, though less frequent, tended to preserve visual acuity and aligns with processes such as macular edema. Intraocular pressure and co-morbidities such as hypertension, diabetes, dyslipidemia, chronic kidney disease, autoimmune conditions, thyroid disease, and pulmonary tuberculosis were not statistically linked to macular thickening or thinning.

RRPC-0019 (as e-Poster) Determining Microbial Contamination of Multi-User Preserved Ophthalmic Drops at an Out-Patient Clinic in a Tertiary Government Hospital in the Philippines

First Author: Nexie C. ***LIBRE***
Co-author/s: Raymond Nelson C. ***REGALADO****, Ricardo Tobias M.* ***PAPA***
Institution: Amang Rodriguez Memorial Medical Center

Purpose: The study aimed to determine the microbial contamination of multi-user preserved ophthalmic drops (POD) and institution-prepared iodine solution used in the Ophthalmology Outpatient Department (OPD) in a Tertiary Level Hospital in the Philippines.

Methods:This study used an experimental, in-vitro study design, with a sampling size of 104 multi-user POD, namely Tropicamide + Phenylephrine Eye Drops, Proparacaine Eye Drops, and Institution-prepared Iodine Solution, conducted at the OPD clinic of a Tertiary Level Hospital. Each bottle's dropper tip and residual contents were aseptically swabbed at four intervals—opening (T0), day 3 (T3), day 14 (T14), and day 30 (T30)—with five replicates per timepoint. The inclusion criteria included recently opened POD bottles, while exclusion criteria included POD bottles with broken seals on new bottles, and bottles with missing caps or tips on the day of collection. Samples were then cultured on blood, chocolate, MacConkey, and Sabouraud agar plates and incubated at 37 °C in 5% CO2 for seven days. Positive cultures would undergo Gram stain and biochemical identification. The Statistical Package for the Social Sciences version 29 was used to analyze contamination prevalence and tip versus contents comparison.

Results: Following our sampling protocol and culture methods, the study showed that out of 104 bottles, with 416 samples, no contamination was detected across the duration of their usage in the OPD clinic.

Conclusion: This outcome supports the efficacy of the institution's handling and aseptic protocols. It also shows the effectiveness of preservatives, and proper hygiene in significantly decreasing the contamination rates in multi-user preserved ophthalmic drops.

RRPC-0021 (as Oral Presentation)
MRI-based Measurement of the Diameters of Extraocular Muscles, Optic Nerve, and Axial Length in Filipino Adults

First Author: Helen Joy J. ***DIZON***
Co-author/s: Michelle ***MATEO-HERNANDEZ****, Eric* ***MAGLAYA***
Institution: Ospital ng Maynila Medical Center

Purpose: This study aims to establish a set of normal values for the diameter of the extraocular muscles, the optic nerve, and the axial length of the eyeball among Filipinos. In determining these reference values, a standardized method of reviewing cranial MRI scans with orbital focus is proposed. This may serve as a guide for both ophthalmologists and radiologists in differentiating possible pathologic from non-pathologic orbital tissues.

Methods: Using the T2 FSE (Fast Spin Echo) images, the diameter of the extraocular muscles and optic nerve were obtained. The widest diameter of the extraocular muscles were measured at its muscle belly. The muscle diameter of the rectus muscles, and superior oblique were measured using coronal view. The sagittal view was used for the inferior oblique. The diameter of the optic nerve was measured in the axial and sagittal view. The measured values were also correlated to the subject's age, weight and axial length.

Results: A total of 112 patients were included in the study, equally divided into male and female proportions (n = 56, 50%). The mean diameter of the rectus muscles from highest to lowest was 2.75 ± 0.49 mm (medial rectus), 2.54 ± 0.61 mm (superior muscle group), 2.28 ± 0.68 mm (inferior rectus), 2.24 ± 0.57 mm (lateral rectus). Among the obliques, the mean diameter of the inferior oblique was 1.39 ± 0.35 mm, which is smaller than the superior oblique with the mean of 1.89 ± 0.48 mm. Optic nerve diameter was measured with a mean of 3.14 ± 0.56 mm from the axial view and 3.37 ± 0.56 mm from the sagittal view. The average axial length was 23.45 ± 1.00 mm. Sex and weight have statistically significant effects on certain orbital structure diameters.

Conclusion: Establishing a normal range of values is crucial in practice and the results of this study may serve as radiological reference values in the assessment of changes in size and suspected pathological diseases of the orbit in Filipino patients.

RRPC-0028 (as e-Poster)
Optic Nerve Head Status Changes of Tuberculosis Outpatients Treated with Linezolid at Northern Mindanao Medical Center

First Author: Benedicto Juan Enrique P. ***AGUILAR***
Co-author/s: Mayjane Joan G. ***TUMULAK***
Institution: Northern Mindanao Medical Center

Purpose: To determine optic nerve head status changes of patients identified for linezolid treatment for tuberculosis at Northern Mindanao Medical Center (NMMC) by comparing baseline and follow-up.

Methods: This was a prospective cohort study that assessed the optic nerve head status of patients undergoing linezolid at baseline to the patient's latest follow-up of at least one month after the initiation of treatment. The effects of patients' weight, medical history and comorbidities, body surface area, and duration from baseline to reassessment, were tested against the changes in visual acuity, color vision acuity, optic nerve head peripapillary retinal nerve fiber layer (PRNFL) thickness, and visual field results.

Results: Nineteen patients underwent linezolid treatment for tuberculosis at Northern Mindanao Medical Center and subsequently underwent baseline ophthalmologic examination. Of these, eight complied with follow-up examination. No statistically significant difference in demographics, systemic comorbidities, or baseline ophthalmologic

examination was found between patients who came for follow-up versus those patients who did not comply. No statistically significant change was noted in visual acuity and color visual acuity, optic nerve head PRNFL thickness on Optical Coherence Tomography (OCT), or visual field analysis results, with no correlation between degree of change and systemic comorbidities, history of smoking, alcohol intake, or ethambutol or isoniazid intake, duration of tuberculosis treatment, patient weight, or body surface area. No patients were found to have developed linezolid optic neuropathy in the study. Two patients had progression of cataract as evidenced in their OCT and visual field results. One patient developed non-arteritic anterior ischemic optic neuropathy (NAION) during the course of linezolid treatment, for which cautious continuation of linezolid treatment yielded progressive recovery and no recurrent deterioration of visual acuity.

Conclusion: No significant change in optic nerve head status was found among tuberculosis outpatients treated with linezolid at Northern Mindanao Medical Center, even when factoring in duration or patient weight, body surface area, or systemic or ophthalmologic comorbidities. Linezolid intake may have an effect on NAION and is worth further investigation.

RRPC-0032(as e-Poster)
Assessing the Sterility of a Multidose Topical Proparacaine Eyedrop Bottle as Multiuse: an In Vitro Study Simulating the Ophthalmic Surgical Setting

First Author: Oliver S. ***LISTANO***
Co-author/s: Sherman O. ***VALERO****, Victor Ephraime V.* ***PAULINO***
Institution: Makati Medical Center

Purpose: This study aimed to evaluate whether a multidose 0.5% proparacaine hydrochloride eyedrop bottle remains sterile when used repeatedly throughout a simulated ophthalmic surgical day. Determining if the reuse of a single multidose bottle, under controlled conditions, would maintain its sterility, will potentially support policy changes toward more sustainable practices in high-volume ophthalmic centers.

Methods:A descriptive in vitro design was employed, replicating the typical usage pattern of a multidose proparacaine eyedrop bottle in a tertiary hospital's operating room. A single bottle of 0.5% proparacaine (Alcaine) was used to instill drops onto culture media hourly from 0700H to 1600H. Each hourly sample was compared against a matched control drop from a newly opened bottle. In total, 10 test and 10 control samples were collected. All samples were inoculated onto sterile blood agar plates and incubated at 35–37°C and cultures were monitored at 24 hours, 72 hours, and 120 hours for microbial growth. The study adhered to sterile handling protocols and manufacturer storage guidelines to simulate real surgical conditions.

Results: None of the 20 samples demonstrated microbial growth at any of the incubation time points. This consistent absence of contamination across all test intervals indicated that the contents of the multidose proparacaine bottle remained sterile throughout the day, even after repeated use. Due to the uniform negative findings, no statistical analysis could be performed, and no organisms were isolated for identification. These results suggest that, under mindful aseptic technique and proper storage, contamination does not necessarily occur with repeated use during a typical surgical schedule.

Conclusion: This study suggests that a preservative-containing multidose 0.5% proparacaine bottle may remain sterile throughout the day when used hourly under controlled conditions. Further studies involving multiple replicates, diverse clinical environments, and longer observation periods are needed to confirm these findings and support broader conclusions about sterility and clinical safety. These results may contribute to the ongoing discussion on sustainable ophthalmic practices, highlighting potential reductions in both pharmaceutical waste and surgical costs.

RRPC-0040(as Oral Presentation)
A Retrospective Analysis of Higher Order Aberrations and Level of Myopic Astigmatism in Southeast Asian Population

First Author: Kevin Jake R. ***LOMIBAO***
Co-author/s: Jerome Mary S. ***SARMIENTO****, Mark Thomas O.* ***CORREA***
Institution: Fatima University Medical Center

The exact role of corneal astigmatism in shaping higher-order aberrations (HOAs) in individuals with myopia has not been fully established. Clarifying this interplay may offer useful insights for both refractive correction strategies and pre-surgical planning.

Methods: We conducted a retrospective analysis of 85 right eyes belonging to adults aged 18 to 65 years. Participants were stratified into low, moderate, and high myopia groups based on spherical equivalent values. Corneal wavefront parameters—including RMS HOA, coma, trefoil, and spherical aberration—were obtained using Pentacam imaging. Group comparisons were performed with non-parametric tests, while associations were assessed using Spearman's ρ.

Results: Astigmatism increased with myopia severity (−0.62 D, −0.69 D, −1.41 D; $p = 0.0028$). However, RMS HOA and principal Zernike terms did not differ significantly across strata. Corneal astigmatism showed no correlation with total HOAs ($\rho \approx -0.10$; $p = 0.388$), and the spherical equivalent was similarly non-predictive. Despite higher refractive error, nearly 90% achieved 20/20 acuity.

Conclusion: Cylinder power, not HOA burden, reliably influenced visual clarity, highlighting the primacy of precise astigmatism correction in routine care.

CLINICAL CATEGORY

RRPC-0003 (as e-Poster)
Ophthalmic Tumors at the Philippine Eye Research Institute, 2013 – 2022: A Retrospective Study

First Author: Ino Paul R. ***VILLACASTIN***
Co-author/s: Rolando Enrique D. ***DOMINGO***
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Purpose: Ophthalmic tumors, both benign and malignant, can affect visual acuity and cause death. Limited data on these tumors in Filipinos exist, with one prior study by Domingo et al. in 2015. No detailed epidemiological analysis has been done since.

Methods: Data were collected from the Philippine Eye Research Institute (PERI) from 2013 to 2022. Tumors were categorized by location (eyelid, conjunctiva, intraocular, and orbit) and type (benign or malignant). Patient age, sex, and laterality were recorded and the results of this study was compared to the previous study by Domingo et al.

Results: Among 1001 confirmed tumors, 376 were in the eyelid (310 benign, 66 malignant), 138 in the orbit (76 benign, 62 malignant), 334 intraocular (11 benign, 323 malignant), and 153 in the conjunctiva (86 benign, 67 malignant). The most common malignant eyelid tumor was sebaceous gland carcinoma, and retinoblastoma was the most frequent intraocular malignancy.

Conclusion: Most tumors of the conjunctiva, eyelid, and orbit were benign, while intraocular tumors were predominantly malignant.

RRPC-0006 (as Oral Presentation)
Comparison of the Visual Performance and Patient Satisfaction Between Two Extended Depth of Focus Lenses among Adult Cataract Patients in a Single Eye Center

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Institution: Cardinal Santos Medical Center

Purpose: To compare the visual performance, contrast sensitivity, patient-reported outcomes, and higher-order aberrations of the Acrysof® IQ Vivity® (AV) and Lentis® Comfort (LC) extended depth of focus (EDOF) intraocular lenses (IOLs).

Methods: This retrospective, comparative study included 116 patients (178 eyes) who underwent uneventful phacoemulsification with implantation of either the AV (66 patients, 102 eyes) or LC (50 patients, 76 eyes). Primary outcomes were uncorrected and corrected distance, intermediate, and near visual acuity (VA). Secondary outcomes included refractive predictability, defocus curves, contrast sensitivity, higher-order aberrations, and patient-reported outcomes using validated questionnaires.

Results: Both IOLs provided excellent distance vision, with >95% of eyes achieving 20/25 or better. Corrected intermediate VA was significantly better with the AV group in both toric and non-toric subgroups.

Conclusion: Both Acrysof® IQ Vivity® and Lentis® Comfort IOLs resulted in excellent visual outcomes, predictable refractive results, and favorable patient satisfaction profiles. AV showed a consistent advantage in corrected intermediate vision, which may be meaningful for patients with high intermediate visual demands. The visual performance of patients suggest that both IOLs fulfill the criteria of EDOF IOLs.

RRPC-0009 (as e-Poster)
The Quality of Life of Enucleated Patients before and after Provision of Prosthetic Eye: A Prospective Study in a Tertiary Hospital in the Philippines

First Author: Zyrene Mary Chantal T. ***URGEL***
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Institution: Rizal Medical Center

Purpose: To evaluate the quality of life of enucleated patients before and after provision of prosthetic eye and examine the impact it brings when a prosthetic eye is fitted on.

Methods: Thirteen (13) patients who were admitted at a tertiary hospital and were planned for enucleation by the Plastics, Lacrimal, and Orbit (PLO) consultant were recruited for the study. All of these were interviewed and were referred to an in- house Psychiatrist for psychiatric evaluation. Only patients diagnosed with normal reaction to illness or no psychiatrist disorders were included in the study and were asked to sign an informed consent. Two questionnaires were then used for the study, the Hospital Anxiety and Depression Scale (HADS-P) and the Visual Function Questionnaire (VFQ-25). These questionnaires were used before the surgery, before prosthesis (1 month after surgery) and after prosthesis (2 months after surgery). Patients were given post-op care and were advised to wear protective goggles after provision of the prosthetic eye.

Results: The study used descriptive statistics, paired T-Test to compare the psychosocial condition of enucleated patients before and after prosthesis and ANOVA for differences in psychosocial condition when grouped according to profile. Using the HADS-P questionnaire, most patients had abnormal scores before the surgery with 86.42% of the total population, showing that the anxiety and depression of these patients were heightened before the surgery. After 1 month of surgery, results were noted to improve with only 53.85% of the total population and after prosthesis (2 months after surgery), most of the patients had normal results with 76.92% of the total population. The same results were noted in the visual function of patients across multiple

domains, including general health, general vision, ocular pain, near activities, distance activities, social functioning, mental health, role difficulties, dependency, color vision, and peripheral vision. Among the various demographic profiles considered, age was the only significant factor influencing the psychosocial condition of patients, with a noted association between age and levels of anxiety and depression.

Conclusion: The quality of life of enucleated patients before and after provision of prosthetic eye had significantly improved. Therefore, the use of prosthetic eyes plays a vital role in enhancing the quality of life of these patients. Beyond the cosmetic benefits, prosthetics significantly improve psychological well-being and overall mental health.

RRPC-0010 (as Oral Presentation) Retreatment Using LASIK, PRK, or ICL for Myopic Regression After Corneal Laser Refractive Surgery

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Institution: Cardinal Santos Medical Center

Purpose: To evaluate outcomes of retreatment for myopic regression after primary laser-assisted in situ keratomileusis (LASIK) or photorefractive keratectomy (PRK) and to explore factors associated with pre-retreatment refractive error.

Methods: Retrospective cohort of eyes undergoing retreatment with LASIK, PRK, or implantable collamer lens (ICL) implantation after prior LASIK/PRK. Outcomes included uncorrected distance visual acuity (UDVA), corrected distance visual acuity (CDVA), manifest refraction spherical equivalent (MRSE), and safety and efficacy indices through 6–12 months. Associations between baseline factors and pre-retreatment MRSE were assessed.

Results: There were 158 eyes included (136 LASIK, 12 PRK, 10 ICL). Early postoperative outcomes improved significantly for LASIK (UDVA 0.37 to 0.04 logMAR; MRSE −1.28 D to −0.12 D) and ICL (UDVA 0.68 to 0.03 logMAR; MRSE −2.72 D to 0.03 D). PRK also produced significant UDVA gains (0.63 to 0.06 logMAR). Efficacy and safety indices were near or above 1.0 across groups. A longer interval since primary surgery was significantly linked to more negative MRSE, consistent with greater regression. Mild correlation between pre-retreatment MRSE and age, initial MRSE, and tissue ablation were observed. Complications were low (7.9%).

Conclusion: Retreatment for myopic regression with LASIK, PRK, or ICL was safe and effective, with stable outcomes through 6–12 months. Regression was multifactorial and not predicted by baseline characteristics, though longer intervals between surgeries were significantly associated with greater myopic regression.

RRPC-0011 (as Oral Presentation) Visual and Refractive Outcomes of Eyes with Low Corneal Astigmatism Implanted with Low Toric or Non-Toric Trifocal Intraocular Lenses: A Retrospective Cohort Study

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Purpose: To evaluate visual and refractive outcomes of cataract patients with low corneal astigmatism (-0.50 D to -1.50 D) implanted with either a low toric or non-toric trifocal IOL.

Methods: This retrospective cohort study included patients with low corneal astigmatism measured by the IOLMaster 700 (Carl Zeiss AG, Germany). Patients received either a trifocal toric IOL (FineVision Toric POD FT) or a trifocal non- toric IOL (FineVision POD F or POD F GF). Toric implantations formed the TT (True Toric) group. Eyes recommended toric by the Barrett Toric Calculator but were implanted with non-toric IOLs were named as NTT (Non-Toric IOL, Toric) while those not recommended toric IOL placed in the NTNT group(Non-Toric IOL, Non-Toric). Visual acuity, refraction, and astigmatism

were assessed preoperatively and 6–12 months postoperatively.

Results: Among 167 eyes (88 TT, 65 NTT, 14 NTNT), postoperative uncorrected visual acuities were similar across groups. Mean refractive cylinder was lower with TT (-0.40 D) vs NTT (-0.68 D).

Conclusion: The use of the low toric models of trifocal IOLs resulted in a significant reduction in preoperative corneal astigmatism, leading to good visual outcomes. Correcting preoperative corneal astigmatism of at least -0.75 D with against-the-rule astigmatism is particularly effective. Our study results showed that when considering trifocal IOLs, patients will benefit from using low toric IOLs to correct preoperative corneal astigmatism of -0.50 D to -1.50 D.

RRPC-0013 (as Oral Presentation)
Effect of Preservative-Free versus Preserved Diquafosol Sodium 3% Eye Drops on Tear Film Inflammatory Markers and Clinical Severity of Dry Eye Disease: A Single-Center Randomized Controlled Trial

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Purpose: To compare the effects of preservative-free diquafosol sodium 3% (Diquas-S) versus preserved diquafosol eye drops on tear cytokine levels, ocular symptoms, and tear film stability in patients with dry eye disease (DED)

Methods: This was a randomized, controlled, single-center, single-masked comparative study of 86 patients with DED. Patients received either preservative-free diquafosol (Diquas-S, Santen Pharmaceutical Co., Ltd., Japan) (n = 43) or preserved diquafosol (Diquas, Santen Pharmaceutical Co., Ltd., Japan) (n = 43) for 8 weeks. Tear concentrations of interferon gamma (IFN-γ), interleukin-6 (IL-6), interleukin-17A (IL-17A), and tumor necrosis factor alpha (TNF-α) were measured at baseline and after 8 weeks using the ProcartaPlex™ Human Mix & Match Panels (Thermo Fisher Scientific, USA). Responders were defined as participants achieving ≥25% cytokine reduction. Associations between cytokine suppression and clinical measures, including SPEED questionnaire scores, fluorescein tear break-up time (TBUT), Schirmer's test, and ocular surface staining, were analyzed.

Results: Eighty-five (85) eyes completed the study. Preservative-free Diquas-S achieved significantly greater reductions in cytokine levels compared with preserved diquafosol (mean reductions: IFN-γ −65.4%, IL-6 −72.1%, IL-17A −61.8%, TNF-α −70.3% vs. −18.7%, −22.9%, −24.1%, and −15.6%, respectively). Responder rates were markedly higher with Diquas-S across all markers. Cytokine suppression correlated with improvements in SPEED score, TBUT, and ocular surface staining, with IL-6 and TNF-α showing the strongest associations. Schirmer's test values showed weaker correlation. Subtype analysis indicated the greatest cytokine suppression in aqueous-deficient DED, particularly for TNF-α, while evaporative and mucin-deficient subtypes exhibited variable responses.

Conclusion: Preservative-free diquafosol provides superior cytokine suppression and clinical improvement compared with preserved formulations, underscoring its role in long-term DED management and supporting the utility of cytokines as biomarkers for treatment monitoring.

RRPC-0022 (as Oral Presentation)
The 11-Year Demographic and Clinical Profile of Low Vision Patients in the National Specialty Center for Eye Care in the Philippines from 2014-2024 - A Hospital-Based Study

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Institution: East Avenue Medical Center - Department of Health Eye Center

Purpose: Low vision is a significant cause of disability worldwide, impairing a person's functional independence and quality of life. In the Philippines, data regarding low vision

patients are scarce. Identifying the clinical and demographic profile of this population is crucial in the development of policies and programs that can aid in preventing or addressing the causes of low vision in this population. This study described the demographic and clinical profiles of low vision patients seen at a National Specialty center in the Philippines over the last 11 years (2014-2024), highlighting functional impairments, etiologies, and management patterns.

Methods: A retrospective chart review was conducted on all patients diagnosed with low vision at the Low Vision Clinic of East Avenue Medical Center–DOH Eye Center between January 1, 2014 and December 31, 2024. Demographic variables that were included are age, sex, residence, education, employment status, civil status, living conditions, and systemic comorbidities. Clinical data included activities of daily living (ADL), distance and near visual acuity, contrast sensitivity, etiologies, surgical history, and management. Descriptive statistics were applied, using variable-specific denominators when data were incomplete.

Results: A total of 442 patients were included with a mean age 36.6 years; 52.3% male. The National Specialty Center received the most number of referrals pre-pandemic (2014, 2016, and 2017) with a noted decline during the COVID-19 pandemic. In terms of demographic distribution, the majority of patients from the low vision clinic resided in the urban NCR (64.0%), only 30.3% had attained tertiary education, and 66.9% were unemployed. The data on civil status (n = 394) showed that 55.6% were single and 41.9% were married while thehe living conditions showed that the majority (97.7%) lived with others. The comorbidities among the study participants were also analyzed, with the most common associations being diabetes (12.9%), hypertension (7.5%), and tuberculosis (6.1%). The visual acuity of the patients measured on initial consult, showed that the majority presented with near-total blindness (80.9%), while 10.0% had profound low vision and 8.1% were totally blind. In testing for near vision (n=287), it showed that while 51.2% had mild impairment, nearly 43% had moderate to near-blindness. The contrast sensitivity (n=251) was normal in 54.6% but reduced in 45.4% (28.3% moderate, 17.1% profound, 13.1% severe, 4.4% complete). The most affected ADLs were detail recognition (51.6%), reading (49.1%), and glare sensitivity (37.8%). Retinal diseases (45.0%), neuro-ophthalmologic disorders (23.5%), and glaucoma (20.4%) were the leading causes. Management included spectacles (48.2%), low vision devices (35.5%; handheld magnifiers 10.0%, stand magnifiers 8.6%, telescopes 8.4%), non-optical aids (tinted goggles 7.0%, canes 5.9%), and referrals (RBI 16.5%, ATRIEV 3.6%).

Conclusion: Low vision in this study showed that it affected younger, socioeconomically disadvantaged patients, most of whom presented at advanced stages with profound functional impairment. The burden was compounded by systemic comorbidities, hereditary and toxic etiologies, and underutilization of rehabilitation. The findings in this study highlighted the need for early referral, functional vision testing, expanded access to low vision aids, and integration of rehabilitation into public eye care.

RRPC-0025 (as e-Poster)
Evaluation Of Safety Of Intracameral Injection Of Commercially Available Preservative-Free Levofloxacin 0.5% Ophthalmic Preparation As Prophylaxis In Cataract Surgery, Iflox (Unimed Pharm Inc, I-Senz Medical Inc) Vs Oftaquix (Santen Pharmaceutical Co., Ltd)

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Purpose: To evaluate the safety of intracameral injection of commercially available preservative-free levofloxacin 0.5% ophthalmic preparations, Iflox (Unimed Pharm Inc, I-Senz Medical Inc) and Oftaquix (Santen Pharmaceutical Co., Ltd.), as prophylaxis in cataract surgery.

Methods: This was a single-center, triple-blind randomized controlled trial including patients aged 50–85 years undergoing uncomplicated phacoemulsification. Participants were randomized to receive an intracameral injection of Iflox or Oftaquix at the conclusion of surgery. Safety parameters assessed at baseline, 1 day, 1 week, 1 month, and 3 months postoperatively included anterior chamber reaction (ACR), best-corrected visual acuity (BCVA), endothelial cell density (ECD), central corneal thickness (CCT), central retinal thickness (CRT), and macular volume (MV). Between-group and within-group comparisons were performed using paired and independent t-tests.

Results: Twenty eyes were included (10 in the Iflox group, 10 in the Oftaquix group). Both groups demonstrated significant improvement in BCVA at all postoperative time points ($p \leq 0.01$). Transient increases in ACR were observed on Day 1 and Week 1 in both groups, resolving by 1 month. ECD decreased significantly over time within both groups, consistent with expected postoperative changes. CCT remained stable after transient early thickening, CRT, and MV showed minimal increases that remained subclinical. Mean difference analysis confirmed that all outcomes improved or remained stable with overlapping confidence intervals, and no significant intergroup differences were observed. At 3 months, there were no statistically significant differences between Iflox and Oftaquix in ACR, BCVA, ECD, CCT, CRT, or MV (all $p > 0.05$), suggesting non-inferiority of Iflox compared to Oftaquix in these parameters.

Conclusion: This study suggests that intracameral administration of preservative-free Levofloxacin 0.5% (Iflox or Oftaquix) may be safe for prophylactic use in cataract surgery. Iflox demonstrated non-inferior safety outcomes relative to Oftaquix, with both agents yielding equivalent improvements in vision, resolution of inflammation, and stability of corneal, endothelial, and retinal parameters. Moreover, it may serve as an accessible alternative for intracameral prophylaxis in cataract surgery.

RRPC-0027 (as e-Poster)
Clinical Profile Of Uveitis Patients In A Tertiary Hospital In Southern Mindanao: A 4-Year Retrospective Chart Review

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Purpose: To describe the clinical profile of uveitis in patients seen at a tertiary hospital in Southern Mindanao, Philippines.

Methods: Clinical records of patients seen from January 2024 to December 2024 were reviewed. Data collected included demographic profile, clinical characteristics, diagnosis, diagnostic workup, and treatment.

Results: A total of 185 eyes from 159 patients' records were reviewed. The mean age at presentation was 44 ± 12 years, with a male preponderance (male: female ratio is 1.2:1). Most patients presented with blurred vision, followed by eye redness and eye pain. A significant number presented with a VA of 20/50-20/160 at the time of presentation. Anterior uveitis was the most common, followed by panuveitis, and an equal distribution between intermediate and posterior uveitis. Most of the cases were chronic and unilateral. Synechiae formation was one of the highest sight-threatening conditions found, followed by cataract development. Etiology was determined for 39 patients (20.8%). Of which, the highest were Tuberculosis-associated.

Conclusion: Uveitis is one of the leading causes of visual impairment globally. A significant number of sight-threatening conditions were noted in this study. The inconsistent laboratory workup requested per patient, unavailability of diagnostic tests, and lack of available medicine derail patient management.

RRPC-0033 (as Oral Presentation)
Clinical Profile And Treatment Outcomes Of Patients With Neovascular Glaucoma In A Tertiary Hospital In The Philippines: A Seven-Year Retrospective Cohort Study

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Institution: Vicente Sotto Memorial Medical Center

Purpose: Neovascular glaucoma (NVG) is a severe and vision-threatening form of secondary glaucoma that arises from ischemic retinal disorders such as proliferative diabetic retinopathy (PDR) and central retinal vein occlusion (CRVO). It is characterized by anterior segment neovascularization, markedly elevated intraocular pressure (IOP), and poor visual prognosis. While global data highlight the refractory nature of NVG despite pharmacologic and surgical management, local data from the Visayas region of the Philippines remain sparse. This study aimed to describe the demographic profile, systemic and ocular risk factors, clinical presentation, and treatment outcomes of NVG patients managed at Vicente Sotto Memorial Medical Center (VSMMC), Cebu, over a seven-year period.

Methods: A retrospective cohort study was conducted by reviewing medical records of all newly diagnosed NVG patients at VSMMC between January 2016 and December 2022. Inclusion criteria were: confirmed NVG diagnosis by a glaucoma specialist, receipt of at least one NVG-related intervention (intravitreal bevacizumab, panretinal photocoagulation [PRP], or trabeculectomy), and follow-up of ≥1 month. Demographic, systemic, and ocular characteristics were recorded, including baseline and follow-up VA and IOP. Data were analyzed descriptively, with statistical comparisons using Wilcoxon signed-rank tests for paired continuous outcomes and z-tests for proportions.

Results: A total of 46 patients (47 eyes) met inclusion criteria. Mean age was 63.6 years (median 66; IQR 55–74), with equal sex distribution. Hypertension (41.3%) and diabetes mellitus (39.1%) were the most common systemic risk factors. The predominant presenting symptom was blurring of vision (80.9%), with ocular pain reported in 23.4%. At baseline, 44.6% of eyes had no light perception (NLP), and only 8.5% retained vision better than 20/200. Median baseline IOP was 52 mmHg (IQR: 38–60). Most affected eyes were phakic (89.3%) and required a median of two glaucoma medications at presentation.Among 34 eyes with ≥1 month follow-up, intravitreal bevacizumab was the most frequently performed procedure (41.2%), followed by trabeculectomy (26.5%) and PRP (8.8%). At last follow-up, median IOP decreased slightly to 50 mmHg (IQR: 44–60), a change not statistically significant ($p > 0.05$). Visual outcomes remained poor, with NLP in 61.8% at baseline versus 67.6% at follow-up ($p > 0.05$).

Conclusion: NVG patients at VSMMC commonly presented at advanced stages, with nearly half already NLP at diagnosis. Despite standard interventions including anti-VEGF therapy, PRP, and trabeculectomy, both IOP and visual outcomes showed no significant improvement. These findings underscore the importance of early detection and timely intervention for ischemic retinal diseases to prevent NVG, as well as the need for strengthened referral systems, patient education, and integration of diabetic eye screening in primary care.

TECHNICAL CATEGORY

RRPC-0001 (as Oral Presentation)
Safety and Efficacy of Intracameral Steroids in Controlling Post-Operative Inflammation in Phacoemulsification: A Meta-Analysis

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Purpose: Cataract is the leading cause of blindness worldwide, and surgery is its primary treatment. Although cataract surgery

generally has a high success rate, post-operative complications, such as inflammation, are common. Traditional methods like topical corticosteroid application are used to prevent these issues. This study aimed to compare intracameral steroid use, a recent innovation, with traditional topical corticosteroid application to understand their efficacy and safety.

Methods: The meta-analysis design and method were reported in line with Preferred Reporting Items for Systemic Reviews and Meta-Analyses (PRISMA) guidelines. We included all randomized control clinical trials (RCT) with completed manuscripts or abstracts published online regardless of publication date or publication status. To obtain the articles for review, the following search terms were used: "intracameral" "steroids", "dexamethasone", "triamcinolone", "cataract surgery", "post-operative inflammation", and "phacoemulsification". The primary outcome was decrease in AC reaction (cells and flare) by SUN Classification. Secondary outcomes included IOP and adverse events.

Results: Four studies were included in this meta-analysis. The pooled mean difference showed no significant difference in the reduction of inflammation scores in anterior chamber cells (MD=-0.11, 95%CI=-0.22 to 0.01, p=0.07), anterior chamber flare between (MD=0.04, 95%CI=-0.04 to 0.13, p=0.29), and in IOP (MD=-0.06, 95%CI=-0.54 to 0.42, p=0.81) between the two groups. Two studies reported on adverse events which observed the absence of serious adverse events in the topic group and one case in the intracameral group.

Conclusion: There is evidence that supports the equivalence of intracameral steroid injections and topical steroids in reducing postoperative inflammation after phacoemulsification. There are also minimal adverse events, including ocular surface toxicity, in both intracameral steroid injections and topical steroids. Postoperative intraocular pressure is also comparative in both treatments. It is recommended that intracameral steroid injections be used as a safe and effective alternative to topical steroids for managing postoperative inflammation after phacoemulsification. Additionally, intracameral steroid injections may offer the added benefit of improved patient compliance due to their convenience and reduced frequency of administration.

RRPC-0007 (as Oral Presentation)
Visual and Refractive Outcomes of the Supracor LASIK Algorithm using the Modified Micromonovision Strategy in Presbyopic Myopic Patients

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Co-author/s: Robert Edward T. ***ANG****, Ryan S.* ***TORRES****, Michelle Marie Quinto* ***ARAÑETA****, Mario Gerard A.* ***PADILLA****, Zoe Alethinos M.* ***DOROY****, Aniana Katherine S.* ***NICANOR****, Luis Andino F.* ***SANTOS***
Institution: Cardinal Santos Medical Center

Purpose: To evaluate long-term visual results, safety, and patient-reported outcomes of Supracor laser-assisted in situ keratomileusis (LASIK) with modified micromonovision in myopic presbyopes.

Methods: This retrospective, single-center study included 96 eyes of 48 myopic presbyopes. Proscan LASIK was performed in the dominant eye and Supracor LASIK in the non-dominant eye, targeting plano and -0.75 D, respectively. Visual acuity, manifest refraction spherical equivalent (MRSE), higher-order aberrations (HOAs), defocus curves, and patient-reported outcomes were assessed at early (6.9 ± 2.3 months) and late (37.6 ± 25.1 months) follow-ups.

Results: At late follow-up, binocular uncorrected visual acuity (distance, intermediate, near) improved to 0.06, 0.05, and 0.13 logMAR with 68.8%, 59.4%, and 31.3% achieving 20/20 or better, respectively. Proscan LASIK eyes maintained strong distance vision (75.8% with 20/20) but limited near vision (9.1% with Jaeger 1+). Supracor LASIK eyes showed better near vision (39.4% with Jaeger 1+). Corrected distance visual acuity (CDVA) of ≥2 lines was lost in 2% of the Supracor eyes. HOAs showed statistically significant changes after

Proscan LASIK and Supracor LASIK for spherical aberration.

Conclusion: A modified micromonovision approach of Proscan LASIK on the dominant eye and Supracor LASIK on the non-dominant eye provided good binocular vision at distance, intermediate, and near with high satisfaction in myopic presbyopes.

RRPC-0012 (as e-Poster)

Title: Filipino Translation of the Adult Strabismus-20 (AS-20) Questionnaire: A Mixed Methods Study

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Institution: The Medical City Ortigas

Purpose: The Adult Strabismus-20 (AS-20) questionnaire was developed to evaluate quality of life (QoL) in adults with strabismus; however, no validated Filipino version exists. Without a culturally adapted tool, important aspects of the patient experience may be overlooked. This study aimed to translate and validate a Filipino AS-20 (FAS-20).

Methods: This was a prospective, cross-sectional study at a tertiary hospital in the Philippines. Thirty-two adults (> 18 years) with clinically evident ocular misalignment were consecutively recruited from outpatient clinics. Eligible participants could read, write, and converse in basic Filipino and/or English and had no history of psychological illness. A forward-backward translation was conducted, followed by content and face validity assessments. A mixed-methods approach was utilized, comprising quantitative analysis of FAS-20 scores and thematic analysis of patient experiences.

Results: The FAS-20 exhibited high internal consistency (Cronbach's alpha > 0.80) and strong content validity indices (I-CVI > 0.80). No significant differences were observed between patients with small versus large deviations, nor between those with prior surgery and those without. Qualitative analysis indicated moderate psychosocial distress centered on self-consciousness, social perception, and interpersonal interactions, while functional concerns such as eye strain and reading challenges showed considerable variation. Five themes emerged: (1) awareness of eye condition through external feedback, (2) challenges in activities of daily living, (3) barriers in the workplace, (4) psychosocial impact, and (5) attitudes toward diagnosis.

Conclusion: The FAS-20 is a culturally adapted and valid tool for QoL assessment in Filipino adults with strabismus.

RRPC-0015 (as Oral Presentation)

Comparison of the Macular Ganglion Cell Layer Analysis and the Peripapillary Retinal Nerve Fiber Layer Thickness Analysis Using Cirrus OCT in Normal, Glaucoma Suspects and Glaucoma Patients Seen at a Tertiary Hospital in the Philippines: A Cross-Sectional Study

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Purpose: Glaucoma is a leading cause of irreversible blindness worldwide, affecting an estimated 76 million people in 2020 and projected to reach 111 million by 2040, with a disproportionate burden in Asia. Characterized by progressive loss of retinal ganglion cells (RGCs), glaucoma often remains undetected until substantial damage has occurred. Traditional diagnostic tools, including standard automated perimetry (SAP), provide valuable information on functional impairment but are limited by the fact that a significant proportion of RGCs must be lost before defects are detectable on visual fields. Optical coherence tomography (OCT) has emerged as a powerful modality for capturing structural changes earlier in the disease process. While peripapillary retinal nerve fiber layer (pRNFL) thickness analysis has long been employed, macular ganglion cell layer (mGCL) thickness analysis has more recently shown promise in identifying early glaucomatous changes. This study compared the diagnostic performance

of mGCL and pRNFL thickness measurements using Cirrus OCT in normal eyes, glaucoma suspects, and patients with varying severities of glaucoma.

Methods: This prospective, cross-sectional study included 163 eyes from adult patients classified as normal, suspect, or having early, moderate, or advanced glaucoma. Convenience sampling was employed during the post-COVID-19 period when outpatient volumes were limited. OCT imaging was performed using the Cirrus HD-OCT 200 × 200 protocol. The mean and sectoral thicknesses of pRNFL (superior, nasal, inferior, temporal quadrants) and mGCL (superotemporal, superior, superonasal, inferotemporal, inferior, inferonasal regions) were measured. Diagnostic performance was assessed by calculating the area under the receiver operating characteristic curve (AUC), sensitivity, and specificity across disease stages. Statistical significance of differences in AUCs was evaluated.

Results: Both pRNFL and mGCL thickness decreased progressively with disease severity. Early thinning was most notable in the superior and inferior quadrants of the pRNFL and in the superotemporal and inferotemporal sectors of the mGCL. For discriminating normal eyes from suspects, mGCL demonstrated a slightly higher AUC (0.691) compared to pRNFL (0.630), although the difference was not statistically significant ($p = 0.150$). A similar nonsignificant advantage of mGCL over pRNFL was observed in distinguishing suspects from early glaucoma and in comparisons of normal versus early glaucoma. In moderate glaucoma, AUCs for mGCL and pRNFL were nearly identical (0.74 and 0.72, respectively). For severe glaucoma, pRNFL showed a higher AUC (0.93) than mGCL (0.85), but again the difference was not statistically significant. Overall, combining both mGCL and pRNFL parameters improved sensitivity and specificity compared to either parameter alone.

Conclusion: mGCL analysis provides diagnostic accuracy comparable to pRNFL analysis and may be particularly useful in detecting early glaucomatous changes. Although pRNFL remains highly effective in advanced disease, mGCL demonstrated a slight, though not statistically significant, advantage in early disease detection. Incorporating both structural parameters in routine clinical practice could enhance the ability to detect glaucoma at earlier stages, enabling timely intervention and potentially reducing the burden of irreversible visual loss. These findings support the role of mGCL assessment as a complementary biomarker in glaucoma diagnostics, especially in resource-limited settings where maximizing the diagnostic yield of existing imaging technology is critical.

RRPC-0020 (as e-Poster)
Thickness of the Eyelid Skin (Epidermis and Dermis) in Filipino Adults Using Ultrasound Biomicroscopy: A Preliminary, Descriptive, Cross-Sectional Study

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Purpose: Ultrasound biomicroscopy (UBM) provides high-resolution imaging of ocular structures and is used for quantitative analysis of the anterior segment. Its ability to delineate microstructural detail offers potential for eyelid skin imaging. To date, no published data exists on measuring eyelid epidermal and dermal thickness using UBM. Few studies have examined eyelid thickness at different points, leaving gaps in knowledge regarding regional variability. Establishing normative values may provide essential references for clinical and surgical applications, particularly in oculoplastic and aesthetic medicine. This study aims to determine the thickness of the epidermis and dermis of the upper and lower eyelids in Filipino adults with Fitzpatrick Skin Phototype IV using UBM. Specifically, it seeks to: (1) describe the ultrasonographic features of the epidermis and dermis of the upper and lower eyelids; (2) determine mean epidermal and dermal thicknesses and compare values between sexes; (3) assess differences across three age groups (18–39 years, 40–59 years, and ≥ 60 years); and

(4) provide baseline data that may guide device settings for eyelid treatments among Filipinos.

Methods: A descriptive cross-sectional study was conducted at St. Luke's Medical Center, Manila, from July–August 2025. Sixty Filipino adults (30 males, 30 females) with Fitzpatrick Skin Phototype IV and clinically normal eyelids were enrolled. Exclusion criteria included prior eyelid surgery, periocular procedures, trauma, inflammatory disease, or hypersensitivity to ultrasound gel or anesthesia. Participants underwent demographic and clinical assessment, ophthalmic examination, and skin testing for gel hypersensitivity. Imaging was performed using the Sonomed Escalon VuMAX HD Ophthalmic Ultrasound system with a 50 MHz probe. Standardized scans of upper and lower eyelids were obtained after topical anesthesia. Thickness measurements were taken using the device's software, recorded in millimeters, and converted to micrometers. Partial results were encoded in Microsoft Excel, and descriptive statistics (mean and standard deviation) were computed for epidermal and dermal thickness.

Results: UBM was performed in 60 participants (10 per subgroup). Independent measurements of epidermal and dermal thickness were completed in six young adults (3 males, 3 females; aged 18–39 years). The epidermis was uniformly thin at all points (40 to 80 um), while dermal thickness varied regionally. In the upper eyelid, the dermis was thinnest at the margin (mean: 540 um) and thickest in the sub-brow region (mean: 773 um). In the lower eyelid, combined epidermal and dermal thickness was greatest at the lid–cheek junction (mean: 845 um) compared with the lower lid margin (mean: 650 um). These preliminary findings align with prior histologic and ultrasonographic studies, indicating that dermal variation largely accounts for regional eyelid thickness differences.

Conclusion:UBM demonstrates regional heterogeneity in eyelid skin thickness, primarily driven by dermal variability and influenced by external factors. These findings are relevant for optimizing incision placement, flap design, and device settings in reconstructive and aesthetic procedures, while guiding patient counseling on healing expectations. Although limited to a small subset of young adults, this study represents the initial characterization of epidermal and dermal eyelid thickness in Filipinos using UBM. Establishing baseline, population-specific normative data may ultimately improve surgical planning, non-invasive interventions, and patient outcomes.

RRPC-0023 (as e-Poster)
Comparison of Visual and Refractive Outcomes Between Same-Day and Scheduled Femtosecond Laser-Assisted In Situ Keratomileusis (LASIK) for Myopia in a Tertiary Hospital

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Purpose: This study compared the postoperative visual and refractive outcomes of myopic patients who underwent same-day versus scheduled femtosecond LASIK at a tertiary hospital in the Philippines, evaluating safety, efficacy, predictability, and stability at three months post-surgery.

Methods: This retrospective, single-center study reviewed records of 790 myopic eyes that underwent femtosecond LASIK at St. Luke's Medical Center, Bonifacio Global City, from February 2022 to February 2025. Patients were categorized into two groups based on the timing and type of preoperative assessment. The same-day LASIK (SD) group underwent refractive screening and LASIK on the same day without cycloplegic refraction, while the scheduled LASIK (SCH) group had screening and surgery on separate days and received cycloplegic refraction. Visual and refractive outcomes, including efficacy, safety, predictability and stability, were evaluated at three months using standardized refractive surgery reporting indices. Manifest and cycloplegic refractions were also compared in the SCH group.

Results: Of the 790 eyes analyzed, 338 underwent SD and 452 underwent SCH. UDVA of 20/20 or better was achieved in 83% of SD eyes and 88% of SCH eyes. Efficacy index was comparable between groups (p = 0.16). Safety was better in the SCH group, with 5% of SD eyes and 4% of SCH eyes losing >2 lines of CDVA, and a higher safety index in SCH (1.04 vs 1.02, p = 0.04). Predictability was also superior in SCH (index 1.00 vs 0.98.

Conclusion: Same-day LASIK without cycloplegic refraction achieves comparable efficacy and short-term refractive stability to scheduled LASIK in adult myopic patients. However, scheduled LASIK demonstrates slightly superior safety and predictability, supporting its continued use in comprehensive preoperative planning, while also validating the selective application of same-day LASIK in appropriate candidates.

RRPC-0029 (as Oral Presentation) Refractive Outcomes of the Four-Flanged Intrascleral Intraocular Lens Fixation Technique

First Author: James Michael G. ***SUAREZ***
Co-author/s: Robert William B. ***KING****, John Philip T.* ***LIM***
Institution: East Avenue Medical Center – DOH Eye Center

Purpose: To describe the refractive outcomes of eyes that underwent four-flanged intrascleral IOL fixation.

Methods: This was a retrospective single-center chart review of eyes that underwent four-flanged intrascleral IOL fixation using the Canabrava technique. Manifest refraction was measured at least 1 month following suture removal. The refractive prediction error (RPE) and absolute RPE (APE) were evaluated using the Barrett Universal II, Hoffer Q, Kane, SRK/T, and Holladay 1 formulas. Correlation analysis between the APE for each formula and axial length, mean keratometry, anterior chamber depth, and white-to-white was done.

Results: In total, 40 eyes from 40 patients were included in the study group. Mean postoperative uncorrected DVA was 20/37 (LogMAR 0.35 ± 0.29) and the mean postoperative best corrected DVA was 20/26 (LogMAR 0.15 ± 0.19). Mean postoperative spherical equivalent (SE) was 0.20 ± 1.53 D, with 60% of patients having a hyperopic postoperative refraction. Mean and median APEs for all IOL formulas were statistically significant from zero.

Conclusion: Patients had refractive outcomes more hyperopic than predicted across all IOL formulas, suggesting the need for preoperative refractive target adjustment. The SRK/T formula had the lowest RPE; however, the difference in APEs among formulas was not significant, suggesting that any IOL calculation formula may be a statistically appropriate option for IOL power calculation. The lack of significant association between APE and biometry values suggests that the outcomes of four-flanged intrascleral IOL fixation are less influenced by axial length and keratometry than other techniques. This suggests that effective lens position, as determined by the position of the sclerotomies and point of fixation, may be the most important factor in refractive prediction accuracy.

RRPC-0030 (as Oral Presentation) Performance Assessment of an Artificial Intelligence System used for Case Detection in a Large Community-Based Diabetic Retinopathy Screening Program in La Union

First Author: Maria Kristina ***EDUARDO***
Co-author/s: Junn ***PAJARILLO***
Institution: Ilocos Training And Regional Medical Center

Purpose: To validate the iCare DRS Plus AI system on Filipino diabetic cohorts within the uncontrolled environment of a community-based setting before it could be adapted and integrated to routine DR screening programs in the Philippines.

Methods: The diagnostic performance of the iCare Illume System (Thirona RetCAD + iCare DRS plus) in detecting any stage DR (ADR) and referable DR (RDR) was validated against a reference standard of two-field fundus photographs read by expert human

graders (retina specialists) was evaluated using Sensitivity (SN), Specificity (SP), Negative Predictive Value (NPV), Positive Predictive Value (PPV), Negative Likelihood Ratio (LR-), and Positive Likelihood Ratios (LR+).

Results: A total of 284 eyes (142 diabetic patients, 717 images) were included in the study. The iCare Illume AI system achieved an accuracy of 83.21 % and 92.37% for ADR and RDR respectively. The SN, SP, NPV, PPV, LR-, LR+ for ADR was 92.11%, 79.57%, 96.1%, 64.81%, 0.10, and 4.50 respectively. The SN, SP, NPV, PPV, LR-, LR+ for RDR was 79.03%, 96.50%, 93.69%, 87.50%, 0.22, 22.58. Technical failure rate was 0.70% (99.3% Imageability).

Conclusion: The iCare Illume system exhibits strong diagnostic accuracy in screening for referable DR in our cohort of Filipino Diabetics. Although its sensitivity is marginally below the UK NICE guideline, the system demonstrates high specificity, negative predictive value, and positive predictive value. This combination highlights its potential as a valuable tool for diabetic retinopathy screening in the Philippines.

RRPC-0031 (as Oral Presentation)

Title: Subtenon Injection Versus Onlay Mitomycin C In Trabeculectomy: A Systematic Review And Meta-Analysis

First Author: Leandrea Mae ***NOLLORA***
Co-author/s: Holijah ***UY***
Institution: East Avenue Medical Center

Purpose: This study aims to be the first meta-analysis to assess the efficacy and safety between Onlay vs Subtenon Injection of Mitomycin C during Trabeculectomy.

Methods: We wrote this review following the PRISMA guidelines. A systematic search (PROSPERO ID number 510438) for RCTs was conducted from Cochrane Library, PubMed, CINAHL, Scopus, and Web of Science. Two reviewers independently screened the studies using Rayyan software. Study quality and risk of bias were assessed using RoB2 criteria. Primary outcomes were IOP reduction and surgical success; secondary outcomes extracted were bleb morphology (height, extent, vascularity) and complications.

Results: 4 randomized controlled studies involving a total of 252 eyes were included in the systemic review. Meta analysis revealed no significant difference in mean or overall surgical success between the two groups. However, significant differences in bleb morphology were observed. The onlay group demonstrated significantly higher bleb height and increased vascularity, while the Subtenon group had larger bleb extent. Complications were comparable for both techniques except for sight-threatening complications where hypotonous maculopathy was more frequently observed in the Subtenon injection group, while blebitis was noted in one onlay patient.

Conclusion: This review revealed that Subtenon MMC injection and Onlay MMC demonstrated similar efficacy in reducing IOP and achieving surgical success but they produce different bleb morphology and complication profiles. These findings guide eye surgeons around the world in choosing the best technique that is tailor fit for their patients. Further large-scale studies are needed with longer outcomes to confirm noninferiority of the techniques in the long term.

RRPC-0037 (as e-Poster)

Comparison Between Wavefront-Based Objective Refraction Using Pentacam® AXL Wave and Manifest Refraction in Myopic and Hyperopic Adults: A Retrospective Analysis

First Author: Marianne Aira F. ***PAED***
Co-author/s: Jerome Mary S. ***SARMIENTO***
Institution: Fatima University Medical Center

Purpose: This study aims to compare the diagnostic performance of the Pentacam® AXL Wave's objective refraction results with those of standard manifest subjective refraction in adults diagnosed with myopia or hyperopia from January 1 to July 28, 2025 in a Tertiary Hospital in the Philippines.

Methods: We analyzed 101 right eyes, comparing manifest refraction with Pentacam® AXL Wave and autorefraction. Vector

parameters (M, J0, J45, B): spherical equivalent (M), astigmatic components (J0 and J45), and the overall blur value (B), were assessed using paired statistics, intraclass correlation, Bland–Altman analysis, and Spearman correlations.

Results: Pentacam consistently reported more minus spherical equivalents (mean bias −4.68 D), while autorefraction was closer to manifest (−1.37 D). Agreement was strongest for J45, with both devices maintaining high correlations but wide limits of agreement for spherical power.

Conclusion: Pentacam reliably captures axis and cylinder, while autorefraction provides a nearer spherical baseline. Final prescriptions still require subjective confirmation to ensure comfort and precision.

HEALTHCARE MANAGEMENT and PUBLIC HEALTH CATEGORY

RRPC-0002 (as Oral Presentation) Evaluating Delays in Antiretroviral Therapy Initiation in HIV Patients: Impact of Pre-Treatment Funduscopy and Associated Risk Factors in the Philippines

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Purpose: The Philippines faces the fastest-growing HIV epidemic in the Asia-Pacific region, lagging in the target goals for timely antiretroviral therapy (ART) initiation. In HIV care, clinical guidelines recommend treating opportunistic infections like cytomegalovirus (CMV) retinitis before starting ART to prevent Immune Reconstitution Inflammatory Syndrome. At some institutions, this has led to local policies requiring pre-ART funduscopy for all patients. This study aimed to evaluate the effect of pre-treatment baseline funduscopy on the antiretroviral therapy initiation delays and to identify associated risk factors among adult treatment-naïve HIV patients at a tertiary referral hospital in the Philippines.

Methods: A mixed-methods observational study was conducted, with the retrospective cohort reviewing medical records of 156 patients and with a cross-sectional component utilizing structured interviews. Inclusion criteria included adult, non-pregnant, treatment-naïve HIV patients referred to the HIV treatment hub of a tertiary hospital from March 2020 to March 2023. The study measured the time from HIV diagnosis to ART initiation, including the delays caused by baseline funduscopy. Multivariable logistic regression was used to identify risk factors contributing to ART delays.

Results: A mean delay of 11.86 weeks from diagnosis to ART initiation was found in patients who underwent pretreatment funduscopy, which is significantly longer than those without this requirement.

Conclusion: This study is the first in the Philippines to document ART initiation delays and reveal how both baseline funduscopy and socioeconomic factors such as actual and perceived distance plus financial concerns prolong treatment. Though funduscopy remains critical, reassessing it for low risk and asymptomatic patients especially with its low diagnostic yield may shorten wait times. Equally vital are initiatives that reduce socioeconomic barriers, minimizing delays. By reconsideration of pretreatment guidelines and improving socioeconomic support services, we can expedite ART initiation and enhance treatment outcomes.

RRPC-0005 (as Oral Presentation) Antiseptic Efficacy and Toxicity of Three 1% Povidone–Iodine Drops versus a Single 5% Povidone–Iodine Drop on Patients Undergoing Elective Ocular Surgery

First Author: Raphael ***GUMAFELIX***
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Purpose: Preoperative ocular antisepsis is critical in reducing the risk of postoperative

endophthalmitis. Povidone–iodine (PI) is widely used, with 5% PI being the standard regimen. However, its oxidative mechanism can induce corneal epithelial toxicity, raising concerns about patient safety and postoperative comfort. Previous evidence suggests that lower concentrations of PI, due to higher free iodine bioavailability, may achieve comparable antimicrobial efficacy with less toxicity when applied repeatedly. This study aimed to compare the antiseptic efficacy and ocular surface toxicity of three drops of 1% PI versus a single drop of 5% PI in patients undergoing elective ocular surgery.

Methods: This prospective, randomized, single-blinded clinical trial was conducted at a tertiary eye center in Quezon City, Philippines. Seventy adult patients (aged 18–80 years) scheduled for elective ocular surgery were randomly assigned to receive either three sequential drops of 1% PI (Group A, n=35) or a single drop of 5% PI (Group B, n=35). Conjunctival swabs were collected before and one minute after PI instillation, neutralized with 0.5% sodium thiosulfate, and cultured on blood agar and chocolate agar for quantitative bacterial growth assessment. Colony-forming units (CFU) were expressed as $\log_{10}$ CFU/mL and percentage reductions were calculated. Corneal epithelial toxicity was assessed immediately after PI instillation using fluorescein staining, photographed, and graded by a masked evaluator using the National Eye Institute (NEI) scale. Statistical analysis included paired and independent t-tests, Mann–Whitney U test.

Results: All 70 participants completed the trial without significant adverse events. Both PI regimens significantly reduced conjunctival bacterial loads compared with baseline on both blood agar and chocolate agar.

Conclusion: Three sequential drops of 1% PI achieved comparable reductions in conjunctival bacterial load to a single application of 5% PI, confirming strong antiseptic efficacy.1% PI was associated with significantly less corneal epithelial toxicity, indicating a more favorable safety profile. These results support repeated 1% PI instillation as a safer alternative to single-dose 5% PI for preoperative ocular antisepsis, particularly for patients where ocular surface preservation is essential. Larger, multicenter trials with functional outcome measures are recommended to refine PI protocols and inform updated clinical guidelines.

RRPC-0017 (as Oral Presentation)
The Influence of Ophthalmology Rotation on Medical Clerks and Interns' Residency Preferences: A Pre- and Post-Rotation Study

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Purpose: Visual impairment is a persistent public health issue in the Philippines. In 2018, the Philippine Eye Research Institute (PERI) concluded that the national prevalence of visual impairment was 1.98%. Most of which are conditions largely treatable with proper ophthalmologic care. Forty two percent of ophthalmologist practice in the National Capital Region with a mean age of 49 years old. With an aging population and uneven distribution, the rural and provincial areas remain underserved. To sustain adequate workforce and improve care, more young physicians are needed in Ophthalmology residency. Previous studies done in other countries show that clerkship/internship and rotation experiences strongly influence specialty choice. In the Philippines, there has been no local data that explores how Ophthalmology rotations shape residency preferences.

Methods: The general objective of this study is to examine how Ophthalmology rotations affect medical clerks and post graduate interns' inclination to pursue Ophthalmology as a specialty. This is a single-center, cross-sectional design done using pre- and post-rotation surveys and questions including encounters in the outpatient department, emergency room/ operating room, lectures, and other factors that influence medical clerks' and interns' perceptions of Ophthalmology. A Wilcoxon signed-rank test and Spearman's rank correlation used for analysis.

Results: A total of 111 participants completed the study. Results showed a statistically significant increase in interest in Ophthalmology both as a general field of medicine.

Conclusion: Clinical rotations in ophthalmology significantly enhance students' inclination to pursue it as a residency option. There is strong evidence suggesting that exposure in clinics and operating rooms is a key driver of specialty selection. Well-planned rotations that prioritize hands-on experience are likely to yield better outcomes in fostering interest and preparing future residents."

RRPC-0018 (as e-Poster)
Burden Of Symptoms And Symptoms Experience Of Filipino Patients With Neovascular Age-Related Macular Degeneration Undergoing Treatment In A Tertiary Private Hospital In The Philippines: A Qualitative Phenomenological Approach

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Institution: University of Santo Tomas Hospital

Purpose: Neovascular Age-Related Macular Degeneration (nAMD) is characterized by central vision loss, which significantly affects the quality of life and activities of daily living of patients. Treatment of nAMD requires frequent clinic visits, leading to medical and socioeconomic challenges. This study aims to explore the symptom experience of patients undergoing treatment for nAMD at the University of Santo Tomas Hospital. This also aims to correlate the best-corrected visual acuity (BCVA) in patients with the duration, number of injections, and other comorbidities.

Methods: This is a single-institution qualitative study using a questionnaire-guided descriptive phenomenological approach among patients undergoing intravitreal injection of anti-VEGF for nAMD. Participants will be selected through a purposive sampling method. To gain comprehensive insights, Key Informant Interviews (KII) will be conducted. Sample size is determined via data saturation or the collection of narratives until redundancy have occurred, and no new information is acquired.

Results: A total of 10 participants were included in the study. Correlation analyses showed no significant association between post-injection BCVA and disease duration, number of injections, or comorbidities. Blurring of vision accompanied by blind spots, difficulty reading, and metamorphopsia are the most common presenting symptoms of nAMD. Most participants described their symptoms as stable, and improvement of symptoms was noted during anti-VEGF therapy. 80% of participants reported disruptions in activities of daily living. Participants perceived factors leading to the disease included work-related stress, comorbid conditions, smoking, and aging, with their main coping mechanism being adherence to medical advice.

Conclusion: This study gives valuable insights to the healthcare team in relation to the symptoms, disease perceptions, and coping mechanisms of patients with nAMD. With these findings, eyecare providers can enhance patient education and strengthen patient–physician communication, ultimately supporting more patient-centered care.

RRPC-0024 (as e-Poster)
Perioperative Care Practices and Antibiotic Prophylaxis in Cataract Surgery: A Local Philippine Academy of Ophthalmology Chapter Survey

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Purpose: This study aims to determine the perioperative care practices and antibiotic prophylaxis in cataract surgery among surgeons from a local Philippine Academy of Ophthalmology (PAO) chapter society.

Methods: A cross-sectional, web-based survey was conducted among 35 cataract surgeons from a local PAO chapter society using a modified, validated instrument adapted from the Asian study on Peri-operative Antibiotic Prophylaxis (APAX) questionnaire. The survey assessed routine practices related to lid scrubs, lid drapes, povidone-iodine application, and

antibiotic prophylaxis, including route, timing, frequency, and dosing during the preoperative, intraoperative, and postoperative phases of cataract surgery.

Results: Routine lid scrubs and preoperative application of povidone-iodine were consistently performed in both low and high-risk cataract surgery cases. Preoperative antibiotics were used selectively in 31.4% of low-risk cases and 51.4% of high-risk cases. Intraoperatively, ~90% of surgeons administered antibiotics, with the intracameral route as the preferred method. Postoperatively, all respondents prescribe topical antibiotics, most commonly Levofloxacin 0.5% and Moxifloxacin 0.5%. In low-risk patients, antibiotics were typically prescribed for 2–4 weeks, whereas high-risk patients received higher dosing frequencies (up to eight times daily) and extended durations exceeding four weeks.

Conclusion: This study shows a strong consensus on antiseptic measures, including routine use of povidone-iodine, lid scrubs, and plastic eyelid draping, as well as using intracameral and postoperative antibiotics. While the longer courses seen in low-risk patients raise the possibility of overtreatment, extended regimens in high-risk patients demonstrate a customized, risk-based approach. These results highlight the need for evidence-based, locally tailored guidelines to improve patient outcomes, promote antibiotic stewardship, and standardize perioperative care.

RRPC-0034 (as Oral Presentation)
Low Vision Knowledge, Awareness And Perceived Barriers To Rehabilitation Among Practicing And In-Training Ophthalmologists In Cebu City, Philippines: A Multi-Center Study

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Purpose: This study examined the knowledge, awareness and perceived barriers to low vision rehabilitation among practicing and in-training ophthalmologists in Cebu City, Philippines.

Methods: A cross-sectional survey was conducted among 60 ophthalmologists (47 practicing, 13 in-training) across multiple hospitals. A structured questionnaire assessed sociodemographic factors, knowledge, awareness, referral practices, and perceived barriers. Data were analyzed using descriptive statistics, Chi-square tests, and regression models.

Results: Respondents were predominantly older than 30 years (91.7%) and male (58.3%). Knowledge of LVR was significantly higher among in-training ophthalmologists (92.3%) compared to practicing ones (61.7%; p=0.036), though awareness did not differ significantly (p=0.558). While most clinicians encountered low vision patients, provision of LVR services and devices was rare, with referrals to external centers being the most common practice. The strongest barriers reported were unavailability and high cost of low vision devices, limited rehabilitation centers, insufficient training, and heavy workload. Patient-related barriers included lack of awareness, motivation, and affordability. Regression analysis showed that institutional factors, rather than demographics or years of experience, influenced perceived barriers. Both groups strongly endorsed creating awareness campaigns, structured training programs, curriculum integration, and improving device availability and affordability.

Conclusion: This study underscores the urgent need to strengthen low vision rehabilitation services in Cebu City through policy development, workforce training, and public education initiatives. Addressing systemic barriers can significantly improve referral practices and accessibility, ultimate enhancing the quality for patients with low vision. These findings provide further interventions aimed at integrating low vision rehabilitation into comprehensive eye care services across the region.

RRPC-0035 (as Oral Presentation)
Prevalence And Risk Factors Of Childhood Myopia In Guadalupe Elementary School In Cebu City: A Cross – Sectional Study

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Purpose: To determine the prevalence and risk factors of childhood myopia among grade school students at Guadalupe Elementary School, Cebu City.

Methods: A cross-sectional study was conducted among 220 children aged 6-9 years. Visual acuity testing, autorefraction, and cycloplegic refraction were performed to diagnose myopia. Sociodemographic and behavioral data, including parental myopia, near work, outdoor activity, and television viewing, were obtained. Chi-square test, t-test, and multivariable logistic regression were used to analyze associations.

Results: The prevalence of myopia was 16.4% (n= 36). Slightly more females than males (44.4 %) were myopic, though not statistically significant (p+0.466). Parental myopia showed borderline association (p = 0.066). Children with myopia spent more hours in near work (6.65 ± 4.16 hrs/day) than non – myopes (5.74 ± 4.06 hrs/day), but this was not significant. Logistic regression revealed that parental myopia was a strong predictor at age 6 (OR 22.13, 95%, CI 2.02 – 242.0, p = 0.012). Outdoor activity showed a protective trend but did not reach significance. Among myopic children, most cases were low (55.6%) and moderate (36.1%), while high myopia was rare (8.3%).

Conclusion: Childhood myopia prevalence in this cohort is lower compared to other Asian countries but demonstrates similar risk patterns. Parental myopia is a strong predictor, while near work and outdoor activity showed non-significant trends. Given that most cases were low to moderate myopia, early detection, parental education, and promotion of outdoor activities are recommended to prevent progression. Further studies with larger and more diverse populations, including private school cohorts, are warranted.

RRPC-0036 (as e-Poster)
Prognostic Value of the Ocular Trauma Score in Predicting Visual Outcomes in Open Globe Injury: A Retrospective Study on a Tertiary Government Hospital Ocular Trauma Registry

*First Author: Selena Ann E. **SOMBRITO***
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Institution: East Avenue Medical Center

Purpose: This study aims to determine the prognostic value of the Ocular Trauma Score (OTS) in predicting visual outcomes of patients with open globe injuries, enrolled in a pioneer ocular trauma registry of a tertiary government hospital in the Philippines.

Methods: Retrospective review of eyes with open globe injuries logged in the tertiary government hospital's ocular trauma registry was done. Demographic and clinical data were collected. Ocular trauma scores were calculated, while each eye was categorized. Univariate analysis done to determine factors with significant association with visual outcomes, and to determine if there is a significant difference between the visual outcomes of the study participants to the predicted visual outcomes of the original OTS study.

Results: In the documented 38 cases presenting with open globe injuries, majority were males (88.4%), with a mean age of 37.92 ± 16.7 years. Workplace-related injuries predominate at 65.79%, with the most common cause of injury being hammer on nail (34.2%). Independent risk factors noted to have a significant association with 6th month visual acuity include RAPD (p=0.005), endophthalmitis (p=0.03), and retinal detachment (p=0.02). No significant difference was found in the 6th month visual acuities of all OTS categories between this study and the original OTS study.

Conclusion: Observed cases in our tertiary government hospital's ocular trauma registry

indicate that there is a predominance of males involved in workplace-related accidents causing open globe injuries. This highlights the importance of proper implementation and adherence to occupational health safety standards. Individual risk factors determined to have a significant association with visual outcomes (VA 20/200 or worse) include presence of RAPD, endophthalmitis, and retinal detachment - knowledge of which may guide clinicians in triaging patients, advising relatives on prognosis, as well as deciding on aggressiveness of management. As our findings indicate that there is no significant difference between 6th month visual outcomes of eyes in our ocular trauma registry and the original OTS study in 2002, we can conclude that the Ocular Trauma Score remains relevant and useful in predicting visual prognosis in open globe injuries.

RRPC-0038 (as e-Poster)
Factors Affecting Awareness and Knowledge of Diabetic Retinopathy Among Adult Patients of the Diabetes Clinic of a Tertiary Government Hospital in Manila, Philippines

First Author: Jose Leandro Manuel Dy ***AMORADO***
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Institution: East Avenue Medical Center

Purpose: To assess the knowledge and awareness of diabetic retinopathy (DR) and the factors affecting these among adult diabetics at the Diabetes Clinic of a tertiary government hospital in Manila, Philippines.

Methods: A total of 144 adult diabetic patients seen at the Diabetes Clinic from September 2024 to December 2024 were enrolled in the study. To minimize bias, patients who had a previous ophthalmologic consult/examination were excluded from the study and fundus photography was provided for free. This study utilized a structured and validated questionnaire that consists of 9 questions to assess DR knowledge, awareness, and practices. Multivariable logistic regression was conducted to explore the association of their clinical and demographic profile with their knowledge, awareness and occurrence of diabetic retinopathy.

Results: The 144 respondents included were typically elderly (56.0±9.9 years) females (59.7%) who finished secondary education (55.6%). There was a high prevalence of the knowledge of the potential harm of diabetes to the eyes, or awareness of diabetic retinopathy (77.1%), and more than half (55.5%) had accurate knowledge regarding its risk factors. Only 14% had correct knowledge about DM retinopathy treatment and only 16% showed good practice regarding DR. Being hypertensive (OR = 5.56, p = 0.05) increased the odds of having knowledge of actual treatment options. Secondary education predicted knowledge of risk factors, and those with secondary education have 89% lower odds of having knowledge of risk factors than those with tertiary education (OR = 0.11, p = 0.03). No predictor was detected for the knowledge on potential harm of diabetes, accurate knowledge of specific eye problems related to diabetes, and perceived knowledge of treatment. Out of 37 participants who were able to have a fundus photo done, 26 (70.2%) did not have signs of DM retinopathy and 9 (24.3%) had moderate NPDR. One participant each had severe PDR and early PDR. No predictor was detected for the occurrence of diabetic retinopathy.

Conclusion: Awareness of diabetic retinopathy was high among participants, however, there remains poor knowledge and practice regarding its treatment and risk factors. A high education level, and those with hypertension, were significantly associated with increased likelihood of knowledge of DR. The limitations of the study include the sampling method used, limited generalizability, and missing data. This may overestimate DR awareness, while underestimating DR prevalence. There should be a widespread effort and close coordination amongst healthcare workers to actively promote not only awareness of diabetic retinopathy but proper knowledge of its risk factors, treatment options and when one should seek eye consultation regardless of symptoms.

RRPC-0039 (as Oral Presentation)
Determining the Carbon Footprint of Cataract Surgery in a Philippine Government Tertiary Hospital

First Author: Mary Juneve P. ***PANGILINAN***
Institution: East Avenue Medical Center

Purpose: Cataract surgery is one of the most common and cost-effective procedures worldwide, yet its environmental impact is rarely quantified in low- and middle-income countries. While it is vision-restoring and improves quality of life, it contributes significantly to healthcare's carbon footprint through patient and staff travel, disposable medical supplies, and energy consumption. No prior studies have quantified the environmental impact of cataract surgery in the Philippines.

Methods: This observational descriptive study quantified the carbon footprint of 126 elective cataract surgeries performed at our institution, from July to September 2024, using the Eyefficiency App v1.7.3. Facility-level, time-and-motion, cost, and travel data were analyzed through a hybrid life cycle assessment model.

Results: The mean carbon footprint per case was 68.49 kg CO_2 equivalents—lower than the global average of 96.69 kg CO_2e. The largest contributors were patient and staff travel (46.50%), procurement of single-use/disposable supplies (29.61%), and electricity use (14.06%). Annual emissions for the center's cataract surgeries were estimated at 94,920.45 kg CO_2e. Average case duration was 94.98 minutes, nearly three times the global benchmark, reducing surgical throughput and increasing energy consumption.

Conclusion: Although the per-case carbon footprint was below global averages, substantial reductions could still be achieved by streamlining patient pathways, decentralizing follow-up care, optimizing operating room efficiency, and engaging suppliers in sustainable procurement. This baseline study provides the first quantified assessment of cataract surgery's carbon footprint in the Philippines and highlights opportunities for integrating sustainability into ophthalmic practice.

FELLOWS' RESEARCH CONTEST

FRPC-0002 (as e-Poster)
Clinical Profile and Outcomes of Primary Angle Closure Disease Patients in a Tertiary Philippine Hospital: A Retrospective Cohort Study

First Author: Kevin John D. ***SY***
Co-author/s: Nilo Vincent ***DG. FLORCRUZ***
Institution: University of the Philippines-Philippine General Hospital

Purpose: Primary angle closure disease (PACD) encompasses 3 stages, with the defining feature of gonioscopic angle closure. The objectives of this study are to determine the demographic and clinical profile of PACD patients in a single institution, and the post-treatment outcomes in terms of visual acuity (VA), intraocular pressure (IOP), and mean deviation (MD) in Humphrey automated perimetry.

Methods: This is a single-center, retrospective study. Medical records of patients diagnosed with PACD from June 2020 to December 2023 were reviewed. Statistical analyses include descriptive statistics, as well as exploratory and post-hoc analyses, and paired t test or Wilcoxon sign rank test to determine differences between groups and pre- and post-intervention outcomes, respectively.

Results: Two-hundred fourteen (214) patients (i.e., 428 eyes) were included in the study. More than half of the eyes were diagnosed with PACG. Most common initial treatments performed were laser peripheral iridotomy, trabeculectomy, medical therapy, and phacoemulsification. Improved VA and decreased IOP trends were observed on succeeding follow-ups; there was no significant change seen in initial and final MD in perimetry tests.

Conclusion: PACD mostly affects female and elderly patients. PACG is the most common diagnosis in 5 out of 10 eyes, with 6 out of 10 PACG eyes classified as severe. The choice of initial treatment depends on the stage of PACD and patient factors. Visual outcomes have improved or remained stable, and IOP

has decreased after intervention. Progression to higher stages is relatively low in eyes initially diagnosed with primary angle closure suspect or primary angle closure.

FRPC-0003 (as Oral Presentation) Clinical and Refractive Outcomes of Laser Photocoagulation Monotherapy Versus Intravitreal Bevacizumab Monotherapy Versus Combination Therapy Among Infants with Treatable Retinopathy of Prematurity in a Tertiary Government Hospital in the Philippines

*First Author: Maria Giselle **DY***
*Co-author/s: Eleonore **IGUBAN***
Institution: Rizal Medical Center

Purpose: This study aimed to compare the clinical and refractive outcomes of retinopathy of prematurity (ROP) patients treated with laser photocoagulation alone, intravitreal (IVT) Bevacizumab injection alone, or a combination of both in a tertiary government hospital in the Philippines.

Methods: A retrospective analytical cross-sectional study was conducted by reviewing medical records of infants treated for ROP from January 2019 to June 2024 and followed-up until at least six (6) months of age. Clinical outcomes (i.e. presence of ROP regression, progression, recurrence and retreatment; time to ROP regression; and presence of structural ocular abnormalities, specifically retinal detachment, macular dragging and fibroproliferative membranes) and post-procedure complications (i.e. cataract formation, retinal detachment, retinal tears/holes, vitreous hemorrhage, and ocular infection) were identified by a retina specialist, while refractive outcomes were measured by a pediatric ophthalmologist. These were recorded and analyzed for statistical differences between treatment groups.

Results: A total of 39 eyes were analyzed. Twelve (12) eyes had laser photocoagulation monotherapy; 15 eyes had IVT Bevacizumab injection monotherapy; and 12 eyes had combined laser photocoagulation and IVT Bevacizumab injection therapy. Baseline characteristics were generally similar across groups, except for the ROP stage at presentation. The laser monotherapy group had mostly Stage 2 disease, while the combined therapy group had mostly Stage 3 disease (P=0.015). Patients in the laser monotherapy group were significantly older at treatment initiation (mean 42.17 weeks, P=0.003). Time to initial ROP regression was longer in the laser monotherapy group (mean 9.33 days, P=0.002), while complete ROP regression took significantly longer in the IVT Bevacizumab monotherapy group (mean 65.08 days, P=0.002). No significant differences were found among treatment groups in terms of disease progression, recurrence, regression or retreatment rates. Fibroproliferative membranes were more common in the combined treatment group, while rates of retinal detachment and macular dragging were similar across all the groups. Refractive outcomes and age at examination of cycloplegic refraction showed no significant differences, and no post-procedure complications were recorded.

Conclusion: Management of treatable ROP is dependent on disease severity at presentation – ROP stage, ROP zone and presence of plus disease. Intravitreal Bevacizumab monotherapy or combined treatment may be preferable for cases requiring urgent initial ROP regression, such as in aggressive disease. For faster complete ROP regression, laser monotherapy or combination therapy may be more suitable, depending on ROP staging. Laser monotherapy may be recommended for infants with Stage 2 ROP in zone 2 or 3 who cannot be closely monitored for progression, while combined therapy may be more appropriate for Stage 3 ROP or those with aggressive disease.

FRPC-0005 (as Oral Presentation)
Keratometric Stability after Pterygium Excision with Conjunctival Autograft

First Author: Julian David P. ***CABRERA***
Co-author/s: Richard Raymund L. ***NEPOMUCENO***
Institution: East Avenue Medical Center

Purpose: Keratometry values change following pterygium surgery. Currently, there is no clear consensus regarding when these changes stabilize, which has clinical value for patients who need subsequent procedures after removal of the pterygium. This study aimed to determine when keratometric stability is achieved following pterygium excision with conjunctival autograft.

Methods: This prospective, single-center, observational study of patients who underwent pterygium surgery with conjunctival autograft was conducted at a tertiary-level government eye center from May to December 2024. Electronic data records of each participant along with corresponding keratometric measurements were enrolled and analyzed.

Results: 32 eyes of 32 patients were included. Overall keratometric values did not show significant variation over time for K1, K2, or Km ($p=0.2426$, 0.1120, and 0.8053, respectively). ΔK showed a statistically significant change across the 3-month follow-up.

Conclusion: Total sample data showed that ΔK significantly decreased post-operatively. Individually, the majority of patients achieved keratometric stability 2 months after surgery. Larger and thicker pterygia may need a longer time to achieve keratometric stability. Additional and longer-term studies are recommended to corroborate the findings.

FRPC-0006 (as e-Poster)
Vitrectomy Outcomes of Proliferative Diabetic Retinopathy patients with Renal Disfunction: A Retrospective Study

First Author: Daniel Jose ***MENDOZA***
Co-author/s: Carlo Antonino L. ***NASOL****, Ma. Cecilia P.* ***GARCIA-ARENAL****, Myron Carlo S.* ***GOMEZ***
Institution: Cardinal Santos Medical Center

Purpose: To determine intraoperative and postoperative outcomes of pars plana vitrectomy (PPV) in proliferative diabetic retinopathy (PDR) patients stratified by renal function.

Methods: This retrospective study reviewed 73 eyes from patients who underwent PPV for PDR at two tertiary centers between January 2021 and December 2025. Estimated glomerular filtration rate (eGFR) was used to classify renal function as normal (≥60 mL/min/1.73 m^2), moderately impaired (30–59), or severely impaired.

Results: 73 eyes from patients with proliferative diabetic retinopathy (PDR) were included, with a mean age of 51.8 ± 9.6 years and a predominance of males (65.8%). All patients had diabetes, and most (71.2%) had hypertension. The majority were pseudophakic (83.6%) and had left-eye involvement (61.6%). The mean eGFR was 35.7 ± 32.2, with 72.6% of patients showing impaired renal function, most classified as severely impaired.

Conclusion: Renal dysfunction may have a role in the surgical complexity and postoperative outcomes of vitrectomy in patients with proliferative diabetic retinopathy. Despite higher complication rates, patients with chronic kidney disease can still achieve meaningful visual improvement. These findings emphasize the importance of incorporating renal function into preoperative risk assessment, providing patient-specific counseling, and ensuring multidisciplinary coordination. Early surgical referral and systemic optimization may improve safety and maximize visual outcomes in this high-risk population.

FRPC-0007 (as e-Poster)
Comparison of Screening with LEA Symbols and Tropicamide-Phenylephrine Cycloplegic Refraction in a Community-Based Vision Screening in Children Aged 5-7 years old

First Author: Denise Patricia M. ***GRANADA***
Co-author/s: Alvina Pauline D. ***SANTIAGO***
Institution: The Medical City

Purpose: The study was done to compare the LEA Symbols Vision Screening Test and Tropicamide-Phenylephrine Cycloplegic Refraction to assess their efficacy in detecting refractive errors among 5- to 7-year-old children in a community-based setting.

Methods: The study utilized a retrospective cohort design with a sampling frame drawn from community vision screening records done at a local elementary school. 213 records of children screening using the LEA Symbols test and subsequently examined through cycloplegic refraction were included. Data were analyzed for predictive values, sensitivity and specificity, using chi-square tests for statistical associations.

Results: Results indicate a significant association between the two methods, with the LEA Symbols test demonstrating robust sensitivity and specificity. The results for the calculations on both eyes show that the LEA symbols screening test correctly identified 76.1% of participants who failed the cycloplegic refraction demonstrating its sensitivity. In contrast, the test correctly identified 71.8% of participants who passed the cycloplegic refraction, indicating its specificity. Among those who failed the LEA symbols screening test, 79.6% of the participants failed the cycloplegic refraction, suggesting a high positive predicative value. Conversely, those who passed the LEA symbols screening test, 67.5% of the participants passed the cycloplegic refraction, reflecting the test's negative predictive value.

Conclusion: Findings highlight that each method has practical utility as an initial screening tool, given its ease of administration and cost-effectiveness in resource-limited settings. While the gold standard for cycloplegic refraction is atropine, its prolonged effects make it unsuitable for mass screenings. Tropicamide-phenylephrine offers a practical alternative for use in community settings. The study underscores the importance of integrating vision screening into community health programs to ensure early detection and intervention, potentially reducing the burden of preventable visual impairment. These results advocate for streamlined referral pathways and emphasize the critical role of accurate, accessible screening in pediatric eye care.

FRPC-0008 (as Oral Presentation)
Mobile-Based Artificial Intelligence Application in Identifying Plus Disease in Retinopathy of Prematurity (ROP): A Diagnostic Accuracy Study

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Co-author/s: Rachelle G. ***ANZURES***
Institution: Ospital ng Makati

Purpose: To determine the diagnostic accuracy of a mobile-based artificial intelligence application in identifying plus disease of retinopathy of prematurity (ROP).

Methods: A cross-sectional analytical study conducted in a Level III Government Hospital. The study population included RetCam3-acquired fundus images of all infants referred to the Department of Ophthalmology for ROP Screening from January 1, 2021 to June 30, 2024. Images were captured through the iRop Assist AI Application using iPad Pro 11 and were also read by three ROP experts. All results were tabulated using Microsoft Office Excel V16.81. Statistical analysis was done using SPSS Software.

Results: The mobile-based AI application showed higher identification rates for plus/pre- plus disease compared to ROP experts, with 20.88% identified in both eyes by the AI and lower rates by the experts. Cross-tabulation reveals that both methods agreed on a substantial percentage of cases, with a small portion of cases misidentified by the AI. The sensitivity analysis for plus/pre-plus disease demonstrated 100% for both eyes,

while the specificity scores were slightly lower. The positive predictive value (PPV) was 68% for OD and 71% for OS, with 100% negative predictive value (NPV) for both eyes. Cohen's Kappa analysis showed strong agreement between the mobile-based AI and ROP experts indicating substantial consistency between the two diagnostic methods.

Conclusion: The findings suggest that the mobile-based AI application shows a great potential as a diagnostic tool for ROP screening, offering both accuracy and reliability in detecting plus/pre-plus disease."

FRPC-0009 (as Oral Presentation)
AI-Powered Decision-Making in Refractive Surgery: Investigating the Capability of GPT-4o to Interpret Pentacam Data in Assessing LASIK Eligibility

First Author: Luis Andino F. ***SANTOS***
Co-author/s: Emerson M. ***CRUZ****, Robert Edward T.* ***ANG***
Institution: Asian Eye Institute

Purpose: To compare the LASIK eligibility assessments of GPT-4o from Pentacam data against two refractive surgeons, and to characterize discrimination, calibration, agreement, and directional biases.

Methods: Retrospective, single-center, observational per-eye study of patients screened from June–December 2024. Pentacam BAD-D and four-map displays were de-identified and assessed by GPT-4o using a standardized prompt, using three stochastic runs per eye with majority aggregation. Each surgeon independently provided binary eligibility and confidence. Primary metrics: sensitivity/specificity, PPV/NPV, AUC, Brier score, Cohen's κ, Fleiss' κ (overall), McNemar's test for paired directional differences. Model repeatability was summarized with ICC (3,1) (descriptive for binary outputs).

Results: 453 eyes from 233 patients with a mean age 33.07 ± 10.82 were included in the study. Surgeon eligibility rates: Surgeon 1: 85.9%, Surgeon 2: 53.6%; GPT-4o: 45.7%. Versus Surgeon 1: sensitivity 53% (95% CI 48–58), specificity 97% (89–100), AUC 0.748 (0.692–0.803), Brier 0.107; McNemar = 176.1 (P

Conclusion: GPT-4o showed moderate discrimination, good probabilistic accuracy, and a safety-leaning profile (higher specificity, lower sensitivity), supporting use as a conservative adjunctive second reader rather than a replacement for clinician judgment."

FRPC-0010 (as e-Poster)
Association Between Peripheral Neuropathy, Peripheral Vascular Disease, and Diabetic Foot Ulcers to Diabetic Retinopathy Among Type 2 Diabetes Mellitus Patients in a Multispecialty Diabetes Center: A Retrospective Study

First Author: Jordan C. ***PINZON***
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Institution: The Medical City - Ortigas

Purpose: Diabetes Mellitus (DM) is a chronic condition that leads to complications affecting various organ systems including diabetic retinopathy (DR), peripheral neuropathy (PN), peripheral vascular disease (PVD), and diabetic foot ulcers (DFUs). This study aimed to explore the association between PN, PVD, and DFU to DR presence and severity among Type 2 DM patients at a private tertiary institution multispecialty diabetes center (PTI MDC).

Methods: A retrospective cross-sectional analysis was conducted involving 178 adult DM patients, examining the relationships between DR and clinical indicators of PN, PVD, and DFU. Fundus imaging as interpreted by ophthalmology specialists at the PTI Eye Center (EC) was used to classify DR severity, while PN and PVD were assessed through standardized tests performed by board certified nurses. DFU presence was inferred from ulcers and healing wounds.

Results: No association was found between DFU and DR as well. However, PVD, indicated by abnormal Ankle Brachial Index (ABI) and weak or absent pulses, showed association for both presence and severity of DR. Specifically,

high ABI was associated with an increased likelihood of DR and referrable DR.

Conclusion: These findings suggest that PVD markers, such as high ABI and abnormal pulses, may serve as surrogate indicators for presence and severity of DR. Further studies are recommended to validate these findings.

FRPC-0011 (as e-Poster)
Association of the Clinical Profile and Prevalence of Human Immunodeficiency Virus (HIV)-associated Ophthalmic Diseases in a Philippine Referral Eye Center

First Author: Minerva R. ***PARIS***
Institution: East Avenue Medical Center

Purpose: The primary objective of the study was to determine the association of ocular manifestations and clinical characteristics of HIV-positive patients seen at a Philippine tertiary referral eye center from 2019 to 2023. The secondary objectives of the study were to determine the patients' clinical characteristics, assess the prevalence of ocular complications and evaluate their association.

Methods: This is a retrospective, cross-sectional study of HIV-positive patients seen at a tertiary referral eye center from 2019 to 2023. By reviewing their medical records, data collected were clinical characteristics, WHO clinical stage, CD4+ T-cell count, and ophthalmologic findings . Statistical analyses performed were descriptive statistics, Chi-Square tests, Mann-Whitney U tests, and binary logistic regression.

Results: A total of 143 patients were included, wherein median age was 33 years, and male at 97.20%. The overall prevalence of any ocular condition in at least one eye was 60.14% with HIV retinopathy (39.16%) being the most prevalent diagnosis, followed by CMV retinitis (19.58%). Association of presence of ocular diseases with severe immunosuppression, as indicated by lower CD4+ T-cell counts, was statistically significant. Patients categorized as WHO Clinical Stage 4 were 14 times more at risk to have an ocular condition compared to those in Stage 1 (OR=14.62, p=0.001).

Conclusion: HIV-associated ophthalmic diseases are highly prevalent in this Filipino cohort, particularly those with advanced HIV/AIDS. Routine eye examination is important for the early detection and prevention of irreversible visual impairment. The findings in our study support the integration of ophthalmologic screening as an essential part of comprehensive HIV care in the Philippines.

FRPC-0012 (as e-Poster)
Association of Erythrocyte Sedimentation Rate and C-Reactive Protein Levels in Patients with Uveitis in a Level III Government Hospital

First Author: Marie Franz D. ***ALCALA***
Co-author/s: Vicente Victor ***OCAMPO*** *Jr., Denise Ramoba Villar* ***CARBONELL***
Institution: Ospital ng Makati

Purpose: The primary objective of this study is to determine the association of ESR and CRP levels in patients with uveitis based on Standardized Uveitis Nomenclature (SUN) Classification, adjusting for age, sex, and systemic causes.

Methods: This is a retrospective cross-sectional analytical study of patients seen at the Uveitis Clinic in a level III government hospital in Taguig City. One hundred nine patients diagnosed by the uveitis consultant from January 1, 2014, to December 31, 2023, with documented ESR within 2 weeks and/or CRP within 1 week of diagnosis, were included in the study. Linear regression was used to assess the relationship between clinico-demographic factors (such as age, sex, and systemic causes) and biomarkers (ESR and CRP). The regression models were adjusted for age, sex, anatomic location, course, activity of uveitis, and systemic causes.

Results: A total of 109 patients, including 67 (61.47%) females and 42 (38.53%) males, were studied. The mean age of the patients was 52.20 + 19.16.Among 94 patients, the median erythrocyte sedimentation rate (ESR) was 30 mm/hr (IQR: 16–50), and among 72 patients, the median C-reactive protein (CRP) level was 5 mg/dL (IQR: 3.30–10.50). Significant

associations were noted between ESR and the anatomic location, course, and activity of uveitis. Posterior uveitis and recurrent uveitis were associated with lower and higher ESR levels, respectively. Active uveitis exhibited elevated ESR levels compared to those in remission. Bacterial uveitis, particularly syphilis, showed a significant association with elevated ESR. No significant associations between CRP and the anatomic location, course, and disease activity of uveitis in either crude or adjusted models.

Conclusion: ESR is significantly associated with the anatomic location, course, and disease activity of uveitis, with higher ESR levels observed in recurrent and active uveitis and lower levels in posterior uveitis. Among the systemic causes of uveitis, syphilis demonstrated a significant association with elevated ESR. In contrast, CRP did not show significant associations with these clinical variables, suggesting it may be less sensitive in reflecting uveitis-related inflammation.

FRPC-0014 (as e-Poster)
Assessment of Macular Function Using the Smith Kettlewell Institute Low Luminance (SKILL) Card as a Screening Tool for Diabetic Retinopathy in Filipino Diabetic Patients from Resource-Limited Settings

First Author: Gabriel Ignacio P. ***ALEJO***
Co-author/s: Paolo Antonio S. ***SILVA***
Institution: The Medical City Eye and Vision Institute

Purpose: Diabetic retinopathy (DR) is a major cause of vision impairment in any context, and therefore, screening methods that are accessible and cost-effective are needed especially in financial and resource constrained areas. Even the more standard and accepted ways of diagnosing DR tend to be expensive, resource-heavy and may not be able to reach patients in all contexts. This study determined if the Smith Kettlewell Institute Low Luminance (SKILL) Card was useful for evaluating macular function and for screening DR in Filipino patients with Type 2 Diabetes Mellitus (T2DM).

Methods: A descriptive cross-sectional study was conducted at a tertiary hospital in the Philippines. Patients with T2DM underwent an assessment of their macular function using the SKILL Card and the Pelli-Robson Contrast Sensitivity Chart. Diabetic retinopathy staging by fundus photography was used as a reference standard. Use of diagnostic accuracy parameters - sensitivity, specificity, and area under the curve - receiver operating characteristic (AUC-ROC) were reported using a person-level analysis based on the worse eye.

Results: There were 92 participants (184 eyes) (mean age 58.3 ± 8.4 years, 55.4% female) included in the analysis. The mean SKILL Card score was 23.6 ± 4.1 and was significantly lower in people with vision-threatening diabetic retinopathy (VTDR) (mean 20.5 ± 3.7) compared to those with no VTDR (mean 25.8 ± 3.2). The diagnostic accuracy of the SKILL Card was good for diagnosing VTDR (AUC = 0.88, 95% CI: 0.81-0.94). When using an optimal threshold of ≤ 24 letters, the SKILL Card had 84.2% (95% CI: 70.9%-92.8%) sensitivity and 77.8% (95% CI: 64.4%-88.0%) specificity. A very strong negative correlation was found between SKILL score and DR stage.

Conclusion: The SKILL Card is a rapid, effective and sensitive instrument for assessing macular function and screening for VTDR in Filipino patients with T2DM. It correlated well with established diagnostic methods and with its strong diagnostic ability, it can be used in resource-poor environments to allow for earlier detection and referral of patients for diabetic eye care.

FRPC-0015 (as e-Poster)
Full-Thickness Macular Hole Closure Patterns Using the Sub-Perfluorocarbon Ophthalmic Viscoelastic Injection Technique (SPOT): A Retrospective Study in a Philippine Tertiary Hospital

First Author: Gabriel Ignacio P. ***ALEJO***
Co-author/s: Ronaldo R. ***JARIN****, Jesus Luis F.* ***EUSEBIO***
Institution: The Medical City Eye and Vision Institute

Purpose: The study looks at results of the Sub-Perfluorocarbon Ophthalmic Viscoelastic Injection Technique (SPOT) in patients with

idiopathic full-thickness macular holes (FTMHs) which underwent pars plana vitrectomy compared to conventional internal limiting membrane (ILM) peeling in Filipino patients.

Methods: We reviewed 35 patients (35 eyes), aged 48 to 85 years, who underwent macular hole surgery at a tertiary hospital in the Philippines between January 2021 and May 2025. They were divided into two groups: Group 1 included 17 eyes treated with pars plana vitrectomy (PPV) using SPOT technique, while Group 2 included 18 eyes treated with conventional ILM peeling. Anatomic outcomes were assessed by comparing pre- and postoperative macular optical coherence tomography (OCT-M) findings in both groups.

Results: The average macular hole (MH) size was similar in both groups – about 455 microns in Group 1 and 450 microns in Group 2. In terms of closure patterns, Group 1 (SPOT technique) showed mostly U-type closures (70%), with fewer V-type (23%) and no W-type closures. In Group 2 (conventional ILM peeling), 50% had U-type closures, 22% had V-type, and 5% had W-type closures. The overall closure rate was higher in the SPOT group, with 94% (16 of 17 patients) achieving full-thickness macular hole closure, compared to 77% (14 of 18 patients) in the conventional group. However, statistical analysis using the chi-square test showed no significant difference in closure patterns between the two techniques ($\chi^2(3) = 3.20$, $p = 0.361$).

Conclusion: Our findings suggest that the SPOT technique is a safe and effective option for repairing macular holes, achieving high closure rates in most patients. This approach shows potential for improving both anatomical and visual outcomes, particularly among Filipino patients with idiopathic FTMHs

FRPC-0016 (as e-Poster)
Concordance Of B-Scan Ultrasonography And Optical Coherence Tomography In Measuring Retinochoroidal Thickness Among Uveitic Eyes In A Tertiary Hospital In Manila, Philippines

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Co-author/s: Teresita R. ***CASTILLO****, Fabian Arnel A.* ***DE JESUS****, Jose Carlo M.* ***ARTIAGA***
Institution: University of the Philippines-Philippine General Hospital

Purpose: To evaluate the accuracy of retinochoroidal thickness measurements in uveitic eyes obtained through over-the-lids B-scan ultrasonography, in comparison to measurements from macular optical coherence tomography.

Methods: A single-center, prospective cross-sectional study, conducted in a tertiary hospital in the Philippines. Included in the study are patients with uveitis in one or both eyes, in any anatomic level using the Standardized Uveitic Nomenclature, and patients with normal eyes. Measurements of the retinochoroidal thickness in the subfoveal area were obtained using a B-scan ultrasonography machine and macular optical coherence tomography. Paired t-test was used to analyze the values obtained from both measurement techniques.

Results: A total of 33 eyes were included in the study; 17 eyes were diagnosed uveitic eyes, and 16 were normal. The mean retinochoroidal thickness measured using B-scan ultrasonography and optical coherence tomography was 2010.3 µm and 480 µm, respectively, with over-the-lids B-scan ultrasonography showing statistically significant values compared to macular optical coherence tomography (p-value = 0.0001). The mean retinochoroidal thickness between uveitic and normal eyes using the B-scan ultrasound were 2289.4um (SD: 644.99) and 1713.8 (SD: 611.68), respectively, with a difference of 575.66 um showing a significant difference in retinochoroidal thickness readings (p-value 0.0133). Retinochoroidal thickness values obtained using macular optical coherence tomography were 483.82 µm (SD: 0.8061)

in uveitic eyes and 477.75 µm (SD: 70.55) in normal eyes, with a difference of 6.07 µm that was not statistically significant (p-value = 0.8061).

Conclusion: Retinochoroidal thickness values appear overestimated when measured with over-the-lids B-scan ultrasonography compared to macular optical coherence tomography.

FRPC-0017 (as Oral Presentation)
Association of Fasting Blood Sugar (FBS) and Glycated Hemoglobin (Hba1c) Levels with Ocular Motor Cranial Nerve Palsies among Patients with Diabetes Mellitus in a Level III Government Hospital: A Retrospective Study

First Author: Marie Franz D. ***ALCALA***
Co-author/s: Karen B. ***REYES***
Institution: Ospital ng Makati

Purpose: To determine the association between fasting blood sugar (FBS) and HbA1c levels in patients with isolated ocular motor cranial nerve palsies and diabetes mellitus.

Methods: This retrospective cross-sectional analytical study included patients seen at the Ophthalmology Clinic in a level III government hospital in Taguig City, Philippines. 20 patients with isolated ocular motor cranial nerve palsies were identified from 482 diabetic patients evaluated between January 1, 2014, and December 31, 2023. Documented FBS and/or HbA1c levels obtained within one month before or after ophthalmologic assessment were analyzed. The Kruskal-Wallis test was used to compare FBS and HbA1c distributions between cranial nerve palsy and control groups. Fisher's exact test compared categorical differences, and post-hoc Dunn tests were applied for pairwise comparisons following significant Kruskal-Wallis results.

Results: FBS levels were significantly elevated in patients with ocular motor cranial nerve palsies, particularly in the cranial nerve 6 palsy group. The mean FBS for cranial nerve 6 palsy patients was 202.36 mg/dL compared to 174.05 mg/dL in non-palsy (p = .0225). Similarly, HbA1c levels were highest among cranial 6 palsy patients, with a mean of 9.24% compared to 8.22% in non-palsy (p = .0389). Notably, 73.33% of cranial nerve 6 palsy patients had HbA1c levels >8%, compared to 41.99% in the non-palsy group, highlighting the association between poor glycemic control and cranial nerve 6 palsy.

Conclusion: Elevated FBS and HbA1c are associated with ocular motor cranial nerve palsy, particularly cranial nerve 6. The coexistence of hypertension and diabetes is linked to increased risk, and isolated cranial nerve palsy may serve as an early indicator of diabetes."

FRPC-0018 (as e-Poster)
Quality Of Life Association With Bilateral Peripheral Vision Decline In Glaucoma Patients

First Author: Patricia Abigail C. ***LIM-TANJUTCO***
Co-author/s: Maria Imelda ***YAP- VELOSO****, Rainier* ***COVAR****, Irene* ***FELARCA****, James Paul* ***GOMEZ***
Institution: Rizal Medical Center

Purpose: Glaucoma is characterized by progressive peripheral vision loss, which often goes unnoticed in early stages. In moderate-to-severe disease, patients may retain normal central visual acuity but suffer constricted peripheral fields, impairing daily activities such as driving. Standard screening protocols measure only the central 30 degrees, while normal human vision extends far wider—110–120 degrees temporally, 60 degrees nasally, 60 degrees superiorly, and 70–75 degrees inferiorly per eye. Current testing may therefore underestimate how peripheral loss affects quality of life. Esterman automated visual field testing, used internationally, measures both binocular and monocular peripheral vision. This study aimed to associate quality-of-life changes with peripheral vision loss using the Esterman protocol in primary open-angle glaucoma patients.

Methods: We conducted a cross-sectional study involving a cohort of 50 patients diagnosed with primary open-angle glaucoma. The majority of participants (36) had severe glaucoma, with most being elderly individuals.

All patients underwent binocular Esterman visual field testing as a method of peripheral visual field estimation. Esterman scores were documented, and quality of life was evaluated using a structured vision-related quality-of-life questionnaire scored on a five-point scale. Statistical analysis was performed to correlate Esterman scores with subjective quality-of-life measures. Subset analysis was carried out to assess differences in correlations across varying glaucoma severities, with particular attention to patients with advanced disease.

Results: Patients with advanced glaucoma demonstrated a mean Esterman score of 67.75 (P=0.01), which falls below the cutoff value of 70 considered the threshold for acceptable vision under Japanese legal standards. Quality-of-life scores were notably low, with patients averaging 2.6/5 on the vision-related quality-of-life questionnaire. Within this group, advanced glaucoma patients reported a significantly lower mean score of 1.4/5 compared to those with less severe disease. Esterman score showed a significant negative correlation with worsening subjective quality of life (R = -0.449; P=0.001). On subset analysis, this correlation persisted only in patients with advanced glaucoma, with R = -0.381 (P=0.022). These findings indicate that binocular peripheral vision loss, as measured by Esterman testing, has a direct and measurable impact on the self-reported quality of life of glaucoma patients, particularly those with severe disease.

Conclusion: This study represents the first to establish a link between glaucoma severity, binocular Esterman scoring, and subjective vision-related quality of life. By demonstrating that peripheral visual field loss correlates strongly with functional impairment and patient-reported well-being, this highlights a gap in current clinical practice that relies heavily on central 30-degree testing. It is hoped that these results encourage specialists to adopt more regular use of binocular perimetric screening in glaucoma patients. Such a practice would provide a more holistic approach to patient care, enabling clinicians to anticipate functional limitations earlier, improve counseling, and critically address the risk of disabling visual outcomes. Broader application of Esterman testing may help prevent overlooked functional losses in patients with moderate-to-severe glaucoma, ultimately advancing patient-centered glaucoma management.

FRPC-0019 (as e-Poster)
Epidemiology, Clinical Profile, and Risk Factors of Retinopathy of Prematurity at a Private Tertiary Hospital in Metro Manila, Philippines

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Co-author/s: Kristine Corpus ***VELASQUEZ****, Jose Melvin* ***JIMENEZ***
Institution: St Lukes Medical Center

Purpose: Retinopathy of prematurity (ROP) is a leading cause of preventable childhood blindness, particularly in middle-income countries where more mature preterm infants remain at risk. This study aimed to describe the clinical and epidemiologic profiles of preterm infants referred for ROP screening in a private tertiary hospital in Metro Manila and to identify risk factors associated with ROP development.

Methods: This observational cross-sectional study included 126 infants referred for ROP screening from June 2024 to May 2025. Screening was performed by retina specialists and fellows using indirect ophthalmoscopy through pharmacologically dilated pupils. Demographic and clinical data, including risk factors and comorbidities, were collected. Univariate and multivariate logistic regression analyses were conducted to determine independent predictors of ROP.

Results: Of the 126 infants screened, 24 (19.0%) developed ROP, with 12 (9.5%) presenting with Type 1 ROP. Infants with gestational age ≤28 weeks had the highest incidence (70%), followed by those born at 29–31 weeks (48.3%).

Conclusion: The incidence of ROP in this study was 19%, with 9.5% developing Type 1 ROP, lower than previously reported rates in the same hospital and in the country. Low gestational age and pRBC transfusion were identified as independent predictors of ROP

development. These findings underscore the importance of careful monitoring of high-risk infants and judicious use of blood transfusions to reduce ROP risk.

FRPC-0020 (as Oral Presentation)
Visual, Refractive and Satisfaction Outcomes Following Myopic Presbyond Treatment in the Philippines: A Retrospective Cohort Study

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Institution: St. Luke's Medical Center

Purpose: To evaluate the visual, refractive, and patient satisfaction outcomes of Presbyond laser blended vision (LBV) in Filipino myopic presbyopes.

Methods: This retrospective cohort study included 46 eyes from 23 patients who underwent Presbyond femtosecond LASIK at a tertiary hospital in the Philippines between August 2023 and January 2025. Patients with uncorrected near visual acuity of J2 or worse, preoperative corrected distance visual acuity (CDVA) of 20/25 or better. Outcomes at 6 months included uncorrected distance visual acuity (UDVA), CDVA, predictability, stability, and astigmatic correction. Patient satisfaction was measured using a validated 0–100 scale.

Results: At 6 months, 96% of eyes achieved UDVA of 20/20 or better, and UDVA was within 1 line of preoperative CDVA in 96% of cases. No eye lost >2 lines of CDVA, and 15% gained 1 line. Predictability was high, with 91% of eyes within ±0.50 D and 100% within ±1.00 D of target refraction. Astigmatic correction was precise, with 96% of eyes ≤0.50 D and 92% aligned within ±15° of the intended axis. Refractive stability was achieved by 6 months. Overall satisfaction scores were high, with most patients reporting spectacle independence at distance intermediate and near.

Conclusion: Presbyond LBV is a safe, effective, and predictable option for presbyopia correction in myopic Filipino patients, demonstrating excellent refractive accuracy, stability, and high patient satisfaction."

FRPC-0021 (as e-Poster)
Behavioral Intention to Use MD EyeCare by Barangay Health Workers in Detecting Leukocoria

First Author: Geraldine Clare Marie P. ***NEGRE***
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Institution: East Avenue Medical Center

Purpose: To determine the behavioral intention to use MD EyeCare among barangay health workers (BHWs) to detect leukocoria.

Methods: This was a cross-sectional study that included BHWs in districts I and IV of Quezon City. Retinoblastoma awareness was determined in the first part of the questionnaire. An educational video about retinoblastoma and a video on the use of MD EyeCare were then shown before they tried the application. They were subsequently asked to answer a 16-item questionnaire, which was translated into Filipino, measuring perceived ease of use, perceived usefulness and behavioral intention to use MD EyeCare. Descriptive statistics and Pearson product-moment correlation were performed.

Results: The responses of 192 BHWs were included in the analysis. The majority were females (92.19%), with a mean age of 53.69 years. More than half (55.73%) were high school graduates. Median years of experience as BHW was three years, with a range of 1 month to 41 years. Mean perceived usefulness and perceived ease of use scores were both at 1.17. These two components had direct very strong correlation to Behavioral Intention to Use.

Conclusion: Barangay health workers in this study intend to use MD EyeCare to detect leukocoria. Screening programs for children under five years of age can utilize this smartphone-based tool as it is useful and easy to use.


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