The Sydney Eye Hospital Alumni Association
13th Biennial Meeting
Saturday 5th July 2025

PROGRAM

VENUE:

Swissotel

68 Market Street, Sydney

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Welcome

On behalf of the organising committee, I would like to welcome you to the 13th Biennial Sydney Eye Hospital Alumnus meeting for 2025 at the Swissotel in Sydney.

This year we have organised the meeting with Oculoplastics as the central theme with The Eddie Donaldson Lecture presented by Professor Dinesh Selva from Adelaide. Professor Selva is a most distinguished Australian Oculoplastics Specialist whose expertise is acknowledged widely, and he is demand on the international speaking circuit.

The role of the ophthalmic trainee in research as usual is the core of this meeting and there will be engaging presentations with the Best of Grand Rounds and free papers showcasing the work of Sydney Eye Hospital Trainees.

As well we have updates from the Retina and Cornea Units outlining the wonderful work being done in Sydney Eye Hospital.

There is a $500 prize for the best free paper presentation and the winner of the SEHA Travelling Scholarship worth $10,000 will be formally announced at the end of the day.

Of course, none of this is possible without the support of our sponsors and especially would like to thank our Major sponsors Apellis & Roche. Please take the time to visit our sponsors and exhibitors during the meeting.

We look forward to meeting you all at this wonderful opportunity to engage with your colleagues over some very interesting presentations and to meet some of our finest up and coming Ophthalmologists.

Dr Ross Ferrier
Chair, Sydney Eye Hospital Alumnus Association

Dr Greg Horowitz
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Professionalism
Ethical Practice

The Sydney Eye Hospital Alumni Association meeting has been accredited
- Education: 5 Hours
- CAPE: A, P, E

Program

Session 1: ***0830-1030*** **Chairs:** Dr Ridia Lim & Prof Andrew Chang		
0830 – 930	Best of Grand Rounds 2023-2025 Registrar presentations	
	Case 1 – Through the Roof	Dr Liane Papantoniou
	Case 2 – Orbital metastases	Dr Dhiren Dhanji
	Case 3 – Autism and Vitamin A deficiency	Dr Michelle Hui
	Case 4 – Optic nerve swelling	Dr Melvin Ling
	Case 5 – Scrambling the diagnosis	Dr Matthew Lee
930 – 945	History of the Retina Unit	Dr John Gregory Roberts
945 – 1000	Sydney Eye Hospital Retina Unit update	Dr John Downie
1000- 1015	Sydney Eye Hospital Foundation Update & Outreach to Moree	Prof Gerard Sutton
Morning Tea: 1015-1045		

Session 2: ***1045-1200*** **Chair:** Ross Ferrier		
1045 -1115	The Eddie Donaldson Memorial Lecture: Approach to lacrimal gland enlargement	Dr Craig Donaldson (Introduction) Prof Dinesh Selva
1115 – 1130	Experience as an Ophthalmologic mentor	A/Prof Krishna Tumuluri
1130 -1145	AI in ophthalmology	Dr Geoffrey Painter
1145 -1200	Endoscopic orbital decompression	Prof Dinesh Selva
Lunch: 1200 – 1300		

Session 3: ***1300 – 1440*** **Chair:** Prof Andrew Chang		
BEST FREE PAPERS		
Group 1		
1300-1305	Madelung's disease with Orbital and Periorbital Manifestations	Dr Leonard Mah
1305-1310	Periorbital Microcystic Adnexal Carcinoma with distant metastases	Dr Leonard Mah
1310-1315	Orbital Haemorrhage after Baerveldt Tube Insertion: Case Series	Dr Amitouj S. Sidhu
1315-1320	Metastatic Alveolar Rhabdomyosarcoma to the Orbit: A Case Report and Literature Review	Dr Alex Yu
1320-1330	Discussion	
Group 2		
1330-1335	Non-Mydriatic Fundus Photography in the Emergency Department: Barriers and Benefits	Ms Christyon Hayek
1335-1340	Optical coherence tomography (OCT) in patients exposed to repetitive head trauma: The need for longitudinal analysis to monitor progressive OCT changes	Dr Morgan See
1340-1345	Clinical and immunological biomarker profiling to improve the diagnosis of acute uveitis	Dr Serge Geara
1345-1350	Beyond the Cornea: A Case of Acanthamoeba Keratitis Complicated by Corneal Perforation, Endophthalmitis and Scleral Abscess	Dr Natalie Lee
1350-1355	Herpes Simplex Virus keratitis: treatment trends and visual outcomes in Sydney, Australia, 2020 – 2022	Dr Christian Pappas
1355-1405	Discussion	

BEST FREE PAPERS		
Group 3		
1405-1410	Response to Prostaglandin Analogue Therapy and Predictors for Intraocular Pressure Treatment Effect: LiGHT, UKGTS and TAGS Trials	Dr Su Lynn Yeoh
1410-1415	Outcomes of eyes with persistent diabetic macular oedema: The Fight Retinal Blindness! Project	Prof Mark Gillies
1415-1420	Presentation and Management of Bilateral Lipid Retinopathy and Proliferative Diabetic Retinopathy in a Patient with Gaucher's Disease: a case report	Dr Daliya Sari
1420-1425	Scleral windows for severe nanophthalmos-related isolated posterior uveal effusion	Dr Alex Yu
1425- 1435	Discussion	
Afternoon Tea: 1435 – 1505		

Session 4: 1505-1635		
1505-1550	Medical Retina Updates	
	Dry AMD: Updates & Pivotal Trials	Prof Adrian Fung
	Real world outcomes of Faricimab and 8mg Aflibercept	Prof Mark Gillies
	Current Clinical Trials at Save Sight Institute	Prof Mark Gillies
1550 – 1635	Cornea Symposium: Cornea transplants in 5 years will not be necessary	
	Improved keratoconus detection	Prof Gerard Sutton
	Exploration of stem cell therapy	Dr John Males
	Fuchs gene therapy	Dr Saadiah Goolam
Reception and Cocktails: 1635 – 1745		

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Madelung's disease with Orbital and Periorbital Manifestations

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Keywords:
Benign symmetric lipomatosis, Madelung's disease, Multiple Symmetric Lipomatosis, Launois–Bensaude, periorbital, orbital

Purpose: Madelung's disease is an isolated lipomatosis typically involving the upper body, neck, and face, but rarely with orbital and periorbital involvement. We aim to describe a case of orbital and periorbital Madelung's disease and a comprehensive review of the literature.

Methods: Case report and review of literature.

Results: A 56-year-old morbidly obese man with an extensive history of alcohol and tobacco use presented with a 4-year history of bilateral periorbital swelling and features of floppy eyelid syndrome. There was associated soft tissue swelling of the face, neck, upper back, and upper chest, in keeping with Madelung's disease. He had marked bilateral soft tissue swelling of the upper and lower eyelids with associated eyelid laxity and mucoid conjunctival discharge, consistent with floppy eyelid syndrome. Exophthalmometry measured 20 mm on the right and 19 mm on the left. Endocrine testing was unremarkable, with an early morning cortisol of 298 nmol/L, adrenocorticotropic hormone of 1.9 pmol/L, and thyroid stimulating hormone of 1.4 mIU/L. Due to morbid obesity and obstructive sleep apnea limiting his ability to lie flat, the patient was deemed high risk from an anaesthetic perspective for surgical management of floppy eyelid syndrome. He was managed conservatively with ocular lubricants and lifestyle modifications including alcohol, smoking, and weight reduction.

Conclusion: Orbital and periorbital Madelung's disease can manifest with periorbital lipomatous changes, proptosis, and optic nerve compression in severe cases. Surgical management is limited due to morbid obesity and associated anaesthetic challenges, necessitating a holistic management approach.

Periorbital Microcystic Adnexal Carcinoma with distant metastases

Authors:
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Keywords:
Microcystic adnexal carcinoma, periorbital, metastasis

Purpose: Microcystic adnexal carcinoma is a locally aggressive adnexal carcinoma of the head and neck which rarely has distant metastasis. We aim to describe a case of periorbital microcystic adnexal carcinoma with distant metastases.

Methods: Case report and review of literature.

Results: A 37-year-old male solarium worker of ten years was referred for management of a left lateral canthus microcystic adnexal carcinoma with no orbital involvement. Although Mohs micrographic surgery achieved clear margins, the patient had a recurrence along the left lateral orbital wall fifteen months post-operatively. The patient underwent a total left exenteration including the lateral bony wall of orbit. Histology confirmed a completely excised lesion of 10mm diameter with infiltration of adjacent orbital fat. Distant metastasis to the left parotid gland was noted eight years later, requiring a radical parotidectomy with excision of the zygoma, upper facial nerve branches, and overlying skin. All lymph nodes in a level 2 and 3 neck dissection were negative for tumour. The area was irradiated with 66Gy over 30 fractions. Two years post parotidectomy, further metastases were excised from the left sartorius, right brachialis, and right trapezius muscles. Perineural invasion was identified in the left sartorius muscle histopathology. Molecular profiling revealed a high tumour mutation burden, and mutations of BAP1, PBRM1, and TP53. Chemotherapy or immunotherapy has been withheld until there are signs of further active disease.

Conclusion: Periorbital MAC is a locally aggressive disease with potential for metastatic spread. All patients need long term surveillance for local recurrence and distant metastases.

Orbital Haemorrhage after Baerveldt Tube Insertion: Case Series

Authors:
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Background:
The Baerveldt tube implant is a non-valved silicone tube used in the management of refractory glaucoma. Baerveldt tubes are generally well tolerated but may be associated with serious postoperative sight-threatening complications. Delayed orbital haemorrhage after Baerveldt tube insertion has been rarely documented.

Methods:
A retrospective case series was conducted involving three patients who developed orbital haemorrhage within one week of elective Baerveldt tube insertion. All surgeries were performed by glaucoma subspecialists under peribulbar anaesthesia. Clinical presentations, imaging findings, management strategies, and outcomes were analysed.

Results:
Three cases of delayed orbital haemorrhage after elective Baerveldt tube insertion for refractory glaucoma are presented. All patients presented with periorbital swelling, proptosis, reduced visual acuity, and restricted extraocular movements. Orbital haemorrhage occurred between 3-6 days after Baerveldt implant insertion and confirmed radiologically. A lateral canthotomy and cantholysis was required in two cases with features of orbital compartment syndrome, followed by rapid improvement in visual acuity and periorbital pain. Potential mechanisms for delayed orbital haemorrhage after Baerveldt tube insertion are discussed.

Conclusion:
Delayed orbital haemorrhage following Baerveldt tube insertion is rare, but potentially sight-threatening complication. This retrospective case series highlights the importance of prompt recognition and early surgical intervention to prevent irreversible vision loss.

Metastatic Alveolar Rhabdomyosarcoma to the Orbit: A Case Report and Literature Review

Alex Yu[1] , MD; Josefina Herrera[1], MD; Amandeep Singh[2], BMedSc, MBBS, RCPA; Krishna Tumuluri[1], BSc (Med), MBBS (Hons), MPH, FRANZCO

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Précis
A 28-year-old female with previously treated rhabdomyosarcoma presented with orbital metastasis of alveolar subtype. Only 11 cases of metastatic orbital rhabdomyosarcoma (ORMS) have been reported, predominantly involving alveolar histology of paediatrics population.

Orbital rhabdomyosarcoma (RMS) is an uncommon orbital malignancy, particularly rare in adults and as a site of metastasis. We report a case of a 28-year-old female with a history of treated right neck RMS, who developed right orbital metastasis of alveolar subtype nine months after completion of therapy. Diagnosis was established via imaging, orbital biopsy, and detection of PAX3:FOXO1 gene fusion. Despite initial treatment with chemotherapy and radiotherapy, disease progression necessitated palliative management.

A literature review identified 11 cases of metastatic ORMS, with a mean patient age of 13 years. Most patients (72.7%) had alveolar histology, and the majority (81.8%) were under 18 years old. Limb primaries were the most common source (45.5%), followed by intra-abdominal or thoracic sites. All patients received chemotherapy, while 63.6% underwent radiotherapy. The average time to orbital metastasis was 15 months, and 72.7% of patients died from disease progression.

This case underscores the aggressive nature and poor prognosis of metastatic ORMS in adults. Early diagnosis, comprehensive staging, and aggressive multimodal therapy are essential to optimise outcomes. Further research is needed to clarify prognostic indicators and improve treatment strategies for this rare entity.

Keywords:
Orbital rhabdomyosarcoma, orbital metastasis, alveolar rhabdomyosarcoma, PAX3:FOXO1 fusion, adult RMS

Non-Mydriatic Fundus Photography in the Emergency Department: Barriers and Benefits

Authors:
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3. Sydney Eye Hospital, Sydney, New South Wales, Australia

Purpose: This study evaluates the implementation of the Welch Allyn RetinaVue 100 Imager in the Liverpool Hospital Emergency Department (ED), focusing on the barriers to its adoption and its clinical benefit. The device, a handheld non-mydriatic camera, allows for point-of-care fundus imaging to expedite diagnosis of papilledema, retinal vascular occlusions and many other pathologies.

Methods: A voluntary survey combining Likert scales and open-ended questions was distributed to doctors who worked in Liverpool Hospital ED in 2025, as well as to ophthalmology registrars who reviewed images transferred from the device to electronic medical records (eMR). The survey collected data regarding the camera's perceived effectiveness, operational challenges, training adequacy and integration into existing workflow. 20 practitioners completed the survey.

Please note: data collection is ongoing, we are expecting a significantly larger number of responses in the next 2 weeks to include in our quantitative and qualitative analysis.

Results: Reported barriers to the camera's implementation included inadequate training, difficulty finding time to take and upload images onto eMR and failure to consistently obtain high-quality images. Patient-related obstacles, such as dense cataracts, darker iris pigmentation, ptosis and limited cooperation were also identified. Nonetheless, the ability to save retinal images for later ophthalmology review and supplementation of clinical documentation were reported advantages. Junior medical staff also found the camera easier to use compared to traditional direct fundoscopy.

Conclusion: Targeted training and workflow adaptation are required to maximise the utility of non-mydriatic fundus photography in emergency departments. These findings can guide strategies aimed at facilitating effective hospital-based implementation of non-mydriatic fundus photography, with the goal of refining communication between emergency physicians and ophthalmologists to enhance patient management. These retinal-imaging technologies can also play a crucial role in telemedicine by providing the opportunity to send images from remote settings to tertiary referral centres, improving access to vision-saving and life-saving care.

Optical coherence tomography (OCT) in patients exposed to repetitive head trauma: the need for longitudinal analysis to monitor progressive OCT changes

Authors: Morgan See, Charlotte Gillies, Maggie Bendersky, Chris Hodge, Angela Schulz, Fatima Nasrallah, Rowena Mobbs, Clare Fraser

Background: Traumatic encephalopathy syndrome (TES) is a clinical research diagnosis associated with chronic traumatic encephalopathy (CTE)- an autopsy diagnosed tauopathy associated with repetitive head trauma (RHT). The effect of RHT on OCT measures such as Retinal Nerve Fibre Layer thickness remains poorly understood, yet progressive thinning has been found in neurodegenerative disease. We sought to investigate the presence of OCT abnormalities in patients with TES.

Methods: 48 patients with a history of RHT from sport underwent neurological and ophthalmological assessment; 27 were diagnosed clinicoradiologically with TES. Other neurological causes of TES symptoms were reasonably excluded using clinical evaluation, neuroimaging, neuropsychological measures and follow up progression.

Results: Mean OCT measures were compared between TES and no TES groups using linear regression, accounting for greater concussion history in the TES group. The TES and no TES groups had comparable average age, cumulative and years since RHT exposure, alcohol consumption. No relationship was found between OCT measures and TES diagnosis. Pearson product analysis revealed positive correlations between OCT measures and RHT exposure, loss of consciousness concussions and Addenbrooke's Cognitive Examination III score. Negative correlations were found between OCT measures and years since RHT exposure.

Conclusions: This baseline analysis found no relationship between OCT measures and TES diagnosis. The negative correlation between OCT measures and years since RHT exposure reinforces the need for longitudinal analysis of OCT measures in patients with a history of RHT. OCT is an inexpensive, non-invasive modality that may be a suitable biomarker for TES and CTE in the future.

Clinical and immunological biomarker profiling to improve the diagnosis of acute uveitis

Serge Geara[1,*], Magdalena Lerch[1,*], Gerard Reid[2,3], Gabrielle Perry[2], Digby Allen[2], Sanjay Swaminathan[4,5], Christine Younan[2,6], Elise Cornish[2,7], Peter McCluskey[2], Clare Fraser[2,8,] Sudarshini Ramanathan[1,9]

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* these authors contributed equally to this work

Background/Objectives: Uveitis is a leading cause of blindness globally. Common aetiologies include infectious or immune-mediated causes, but diagnosis can be challenging and up to a third of patients remain 'idiopathic'. We sought to identify clinical and immunological biomarkers at acute presentation which facilitate diagnosis.

Methods: We prospectively recruited acute uveitis patients from two tertiary centres over 18 months. Careful clinical, serological, visual, and radiological phenotyping was performed. 37 cytokines/chemokines/growth factors were evaluated in patients, and 50 age/sex-matched controls using a Milliplex® Panel or ELISA.

Results: 67 patients (37 female, median age 42 (range 16-79) years), were recruited with a median duration of follow-up of x months (range x-y). 17, 29 and 21 were classified as infectious, immune-mediated and idiopathic, respectively. A relapsing course was more common in the immune-mediated (20/29, 69%) and idiopathic (12/21, 57%) groups compared to the infectious group (3/17, 18%; p=0.0005). 95 affected eyes demonstrated worse visual outcomes in the infectious (median logmar 0.21, IQR 0-0.31) and idiopathic (0.16; 0.02-0.33) groups compared to the immune-mediated group (0; 0-0.19; p=0.05). Macular thickness at nadir was higher in the immune-mediated (270 µm; 260-293) and infectious groups (269; 250-303) compared to the idiopathic group (250; 223-277; p=0.037). Preliminary cytokine/chemokine analysis showed several elevated cytokines/chemokines in uveitis patients compared to healthy controls and different cytokine/chemokine signatures in immune-mediated, infectious and idiopathic aetiologies.

Conclusions/Discussion: Ongoing analysis will provide a clinical and cytokine/chemokine signature which may assist with improved diagnostic profiling of patients with acute uveitis, to guide management and improve outcomes.

Beyond the Cornea: A Case of Acanthamoeba Keratitis Complicated by Corneal Perforation, Endophthalmitis and Scleral Abscess

Authors:
Natalie S Lee [1] MD, MMed(OphthSci), Amir Taher [1] BMed, MPhil(Med), Aishah Aldhanhani [1] MBBS, Stephanie Watson OAM [1,2] FRANZCO

Purpose: To present a challenging case of Acanthamoeba keratitis complicated by endophthalmitis with corneal and scleral abscesses in an immunocompetent patient.

Methods: Case Report

Results: A 47-year-old female presented to Emergency with several months of left eye pain and reduced vision. She was a contact lens wearer and had previously been diagnosed with HSV keratitis. On presentation, her best corrected visual acuity (BCVA) was hand movements at 30cm. Slit lamp examination revealed corneal oedema with a central scar and epithelial defect. She was commenced on hourly ofloxacin and chloramphenicol.

Three days later, the patient developed a corneal perforation, managed with corneal glue and a bandage contact lens. Initial corneal scrapes confirmed Acanthamoeba via PCR with confocal microscopy demonstrating epithelial cysts. The patient was commenced on topical polyhexamethylene biguanide (PHMB), propamidine, chlorhexidine and dexamethasone.

One month later, the patient underwent corneal lamellar graft keratoplasty. Two months post- operatively, the patient developed a 3mm hypopyon and scleral abscess. B-scan ultrasonography confirmed endophthalmitis. She promptly underwent scleral abscess drainage and a tap and inject. Acanthamoeba was again isolated from the scleral abscess.

The extent of orbital involvement prompted MRI imaging, which demonstrated left optic perineuritis, uveitis, and anterior and posterior scleritis. Trimethoprim-sulfamethoxazole, voriconazole and miltefosine were initiated in collaboration with the infectious diseases team. Follow-up MRI after 6 days demonstrated decreased anterior segment enhancement. Systemic medications were ceased after 5 weeks.

At two months follow up, BCVA remained light perception only. She remained stable on topical PHMB, dexamethasone and chloramphenicol.

Conclusion: Acanthamoeba keratitis is a rare but sight-threatening ocular infection typically associated with contact lens wear. 1 While intra-ocular extension is rare, it is associated with a much worse prognosis. Severe complications including corneal perforation and endophthalmitis have been reported in less than 2% of cases. 2 This case underscores the importance of early recognition, aggressive therapy and vigilant monitoring to limit irreversible vision loss.

Herpes Simplex Virus keratitis: treatment trends and visual outcomes in Sydney, Australia, 2020 – 2022

Authors:
Dr Christian P. Pappas[1,2], Dr Maria Cabrera-Aguas[1,2], Anna Condylios [3], Professor Stephanie L. Watson [1,2,]

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2. Sydney Eye Hospital, Sydney, New South Wales, Australia
3. Serology and Virology Division (SAViD), New South Wales Health Pathology, Prince of Wales Hospital, Sydney, NSW, Australia.

Purpose: To evaluate prescribing behaviours for Herpes Simplex Virus (HSV) keratitis in Sydney, Australia from 2020 to 2022, and analyse corresponding visual outcomes. Prescribing behaviours are compared to previous studies conducted in 2018-2019, 2017, and 2012-2013.

Methods: A retrospective review of all adult cases of HSV keratitis presenting to Sydney Eye Hospital between January 1, 2020, and December 31, 2022, was performed. Cases were identified from hospital coding data (ICD-10), swab results, and pharmacy records. Antiviral and topical steroid therapy, and prescriber designation were collected. Best Corrected Visual Acuity (BCVA) and keratitis subtype was recorded. Treatment received was compared to evidence-based local guidelines.

Results: 733 eyes from 714 patients treated for HSV keratitis were included, with median age 55 years (18-102), and 56% being male. Antivirals were prescribed for therapeutic and prophylactic indications in 645/714 (90%) and 69/714 (10%) respectively. Collectively, 494/714 (69%) received evidence-based antiviral treatment compliant with local guidelines. This was similar to 69% in 2018 to 2019 (p=0.940), and lower than 75% in 2017 (p=0.247) and 73% in 2012 to 2013 (p=0.266). For therapeutic indications, compliance was significantly higher for endothelial keratitis and keratouveitis relative to prior studies, and significantly lower for epithelial keratitis compared to 2012-2013 (p<0.001). For prophylactic indications, 78% (54/69) of patients received evidence-based antiviral prophylaxis during their treatment course.

With respect to prescriber designation, residents were compliant in 75% of cases, followed by registrars (70%), fellows (59%), and consultants (68%) (p=0.051).

Among 518 patients the mean initial BCVA was 0.338 LogMAR poorer in eyes affected by HSV keratitis ($p < 0.001$). The inter-ocular BCVA difference (affected less unaffected eye) was greatest in cases of stromal keratitis with ulceration (0.755) and smallest in epithelial keratitis (0.107) ($p < 0.001$).

Of 129 patients for whom BCVA was recorded post-treatment, the mean improvement was -0.132 LogMAR. Mean change in BCVA (final less initial) was +0.008 for epithelial keratitis (n=36), -0.106 for stromal keratitis (with or without ulceration) (n=32), -0.385 for endothelial keratitis (n=8), and -0.205 for keratouveitis (n=53). The difference was significant between epithelial and stromal keratitis only. (p=0.039).

Cases which received therapy compliant with local guidelines demonstrated a significant improvement of -0.346, relative to a reduction of +0.075 for cases which did not ($p = 0.006$). Stratified by subtype, evidence-based treatment was associated with a significant improvement in BCVA for stromal keratitis alone (p<0.001).

Conclusion: Epithelial keratitis demonstrates the best visual prognosis while immune-mediated subtypes carry the poorest. Receiving evidence-based antiviral treatment at presentation improves outcomes.

Non-adherence to evidence-based guidelines for HSV keratitis remains an issue 5-years post-implementation. Further activities are required to sustain guideline adherence, with an emphasis on senior clinicians, among whom guideline compliance appeared lower.

Response to Prostaglandin Analogue Therapy and Predictors for Intraocular Pressure Treatment Effect: LiGHT, UKGTS and TAGS Trials

Su Lynn Yeoh, MD [1] , Eamonn T Fahy, FRANZCO, PhD [2] , Giovanni Montesano, MD PhD [3] , Alp Atik, FRANZCO MPH [4] , Evgenia Konstantakopoulou, PhD [3, 5] , Victoria Vickerstaff, PhD [6] , Anthony King, MD FRCOphth [7] , David Garway-Heath, MD FRCOphth [3] , Gus Gazzard, MD FRCOphth [3] , Anthony Khawaja, PhD FRCOphth [3] .

7. Department of Ophthalmology, Nottingham University Hospital, Nottingham, UK

Introduction: Prostaglandin analogues (PGA) are the most widely recommended first-line medication for glaucoma. 1 Such treatments lower intraocular pressure, thereby reducing the progression of glaucoma and preserving visual function and quality of life. The LiGHT 2 , UKGTS 3 and TAGS 4 randomised controlled trials (RCT) all used PGA eye drops for ocular hypertension and open angle glaucoma in treatment naïve patients, in their respective medication treatment arms. This study aims to describe the IOP response at approximately 8-16 weeks following treatment initiation with PGA eye drops, explore predictive factors for this initial treatment response and determine predictors for long term treatment success on PGA drops alone up to 5 years following treatment initiation.

Methods: Post-hoc analyses on a pooled cohort from three RCTs was conducted using mixed effects linear regression and multi-level mixed effects parametric survival analyses to determine predictive factors of IOP reduction at 8-16 weeks post-PGA treatment initiation and treatment success on PGA drops alone up to 5 years.

Results: A total of 1373 eyes were included in this study. Mean IOP was lower at 8-16 weeks than atbaseline. 68% eyes achieved >20% reduction in IOP. Regression analysis demonstrated significantrelationships between IOP response and baseline IOP (r= 0.61, p-value <0.01) and mean deviation (rr = -0.04, p-value = 0.03). At 5 years, significant predictors for failure to remain at target IOP or remain onPGA drops alone included baseline IOP, post-treatmentearly IOP lowering response, glaucoma severity and ethnicity.

Conclusion: Baseline IOP and mean deviation were good predictors for initial treatment effect of PGA drops

Outcomes of eyes with persistent diabetic macular oedema: The Fight Retinal Blindness! Project

Authors
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Word count: 238 words

Purpose: To compare 1-year and 2-year outcomes of eyes with persistent and non-persistent diabetic macular oedema (DME) treated with vascular endothelial growth factor (VEGF) inhibitors.

Methods: This was a cohort study using the international outcomes database, the Fight Retinal Blindness! (FRB!) registry. We identified treatment-naïve eyes with centre-involving DME that commenced treatment with VEGF inhibitors from 2014 to 2023. Eyes were grouped as those with persistent DME and those with non-persistent DME. Main outcome measures were mean visual acuity (VA) change and central subfoveal thickness (CST) change after 1 year and 2 years of treatment.

Results: This study included 868 eyes; 40% had persistent DME. Mean VA change in eyes with persistent DME was less than eyes with non-persistent DME at 1 year (+3.5 letters vs +6.7 letters; P<0.001) and 2 years (+3.3 letters vs +6.4 letters; P<0.001). The persistent group had a lower mean reduction in CST at 1 year (-74 µm vs -114 µm; P<0.001) and 2 years (-90 µm vs -114 µm; P<0.001) and received more injections at 1 year (mean 7.6 vs 6.5; P<0.001) and 2 years (mean 11.7 vs 9.5; P<0.001).

Presentation and Management of Bilateral Lipid Retinopathy and Proliferative Diabetic Retinopathy in a Patient with Gaucher's Disease: a case report

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Gaucher's disease is a rare familial autosomal recessive disorder of lipid metabolism, which causes an abnormal accumulation of glucocerebrosides in the reticulo-endothelial system. Ocular manifestations include uveitis, pre-retinal and retinal changes with white scattered deposits. Our report presents a 30- year-old Asian male with underlying Gaucher's disease, poorly controlled diabetes mellitus, and bilateral lipid retinopathy, who also subsequently developed proliferative diabetic retinopathy (PDR) complicated by vitreous haemorrhage. Management included both systemic and ocular interventions, focusing on glycaemic control, intraocular pressure (IOP) regulation and PDR management. This case highlights the complexities of treating ocular manifestations in patients with underlying systemic metabolic disorders, necessitating a comprehensive and multidisciplinary approach.

Keywords: Gaucher disease, diabetes mellitus, vitreous haemorrhage

Scleral windows for severe nanophthalmos-related isolated posterior uveal effusion

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Setting/venue:
Vitreoretinal Unit, Sydney Eye Hospital & Prince of Wales Hospital

Purpose:
Nanophthalmos is a known risk factor for spontaneous choroidal effusions that occur in the context of pathologically thickened sclera. Scleral windows for peripherally positioned choroidal effusions and detachments in the context of nanophthalmos have been well described in the literature. However, its use in isolated posterior uveal effusion has not been well elucidated. Herein, we describe a case report of severe isolated posterior uveal effusions treated with scleral windows.

Method/results:
This case describes a 42-year-old woman with a background of nanophthalmos and previous uveal effusion syndrome with peripheral choroidal detachments in her left eye for which she underwent scleral windows 6 months ago. She subsequently presented with progressive visual reduction in her right eye (3/60) with worsening subretinal fluid and outer retinal oedema at the macula for which no other cause except for nanophthalmos was identified. There were no peripheral choroidal effusions or detachments. After failing medical therapy with oral acetazolamide, she underwent inferior 2-quadrant partial thickness scleral windows with sclerostomies, with subsequent improvement in macular fluid and visual acuity.

Conclusion:
Isolated posterior uveal effusion is a lesser-known entity relating to the uveal effusion syndrome spectrum. This case demonstrates successful treatment of severe isolated nanophthalmos-associated posterior uveal effusion treated with inferior 2-quadrant scleral windows and sclerostomies.