Abstract Submission 2022 From: Roslyn Manrique-Lipa

Session Choice: Rapid Fire Session 3' surgical videos : "A great surgical tip… which I learnt from…"

Co Author(s): Sidath Liyanage

Abstract Title: Dealing with a large subretinal air bubble

Purpose: We present a safe and simple technique to remove air bubble migrated under the retina during fluid air exchange.

Setting/Venue: Bristol Eye hospital. Bristol, United Kingdom

Methods: A 63-year-old man presented with three weeks of vision loss in his right eye. Visual acuity in this eye was hand movements with a mild cataract. Fundus examination revealed a total retinal detachment with an open funnel configuration and a large equatorial tear with rolled edges at 9 hours.

Results: We carried out a complete 25-gauge pars plana vitrectomy followed by peeling of PVR membranes with end grasping forceps. However, during air-fluid exchange, migration of a large subretinal air bubble was observed occupying almost one third of the subretinal space. Immediately, the fluid was turned on while aspirating the large bubble with an extrusion cannula proving ineffective. Therefore, the infusion port was removed and placed in the inferonasal quadrant. Active scleral indentation was performed starting above the location of the subretinal air bubble while tilting the eye. This manoeuvre mobilised the bubble towards the large tear and evacuated it. Air-fluid exchange was performed resulting in a flat retina after complete drainage of subretinal fluid. Finally, laser was applied and 1000 Cs of silicone oil was injected.

Conclusion: Subretinal air migration is a complication that occurs in the presence of a large tear located close to the infusion cannula. We treat this complication by repositioning the infusion cannula away from this tear to prevent recurrence. We then mobilise this bubble using active scleral indentation and tilting the eye until it is completely evacuated.

Financial Disclosure: Yes

Abstract Submission 2022 From: Edward Bloch

Session Choice: Rapid Fire Session 3' surgical videos : "A great surgical tip… which I learnt from…"

Co Author(s): Mr Taha Soomro Mr Alistair Laidlaw

Abstract Title: Plugging the gap: scleral autograft in optic disc pit maculopathy

Purpose: This surgical case describes the management of a 63-year-old man with recurrent optic disc pit maculopathy using a scleral autograft plug.

Setting/Venue: This case was undertaken at St Thomas' Hospital, London.

Methods: Following initial successful surgery with vitrectomy and gas tamponade in 2014, this patient experienced a recurrence of right eye serous neurosensory detachment in 2021 and underwent further surgery, including the injection of platelets over the optic disc pit. At 3 months post-surgery there had been no improvement in the retinal anatomy or visual function. He underwent a third operation, during which a scleral autograft was harvested and inserted into the disc pit. 2 weeks post-operatively, the subretinal fluid has completely resolved, with improvement in visual acuity and subjective alleviation of symptoms.

Results: Vitrectomy is the mainstay of treatment in the management of ODP-M, which may be combined with adjunctive steps, such as laser and gas tamponade. Increasingly, the use of autologous tissue (ILM flaps and platelets) has been proposed as a means of achieving improved rates of success. In this case of refractory maculopathy, optic disc pit 'stuffing' with a scleral autograft yielded rapid and complete resolution. During harvesting and insertion of a scleral autograft, care must be taken to size the graft appropriately and fluid-air exchange is recommended to ensure that it remains securely within the pit.

Conclusion: This case demonstrates that pit 'stuffing' with a scleral autograft is a practical and viable treatment option for optic disc pit maculopathy.

Financial Disclosure: No

Abstract Submission 2022 From: Abdallah A Ellabban

Session Choice: Rapid Fire Session 3' surgical videos : "A great surgical tip… which I learnt from…"

Co Author(s): NA

Abstract Title: Inner Retinal Fenestration: A Promising Technique for Treating Optic Disc Pit Maculopathy

Purpose: Multiple surgical techniques have been described for the treatment of optic disc pit maculopathy (ODPM). One recently proposed modality is vitrectomy combined with inner retinal fenestration which aims to redirect the flow of the fluid into the vitreous cavity.

Setting/Venue: Video Presentation

Methods: We describe a case of a 35-year-old male who presented complaining of reduced vision for 2 years in the left eye (6/60) due to ODPM associated with a large accumulation of subretinal fluid. Vitrectomy was carried out in the usual manner, then a small fenestration was made via a 25g needle. The fenestration is only partial-thickness in the inner retina, made just temporal to the optic disc pit. This is followed by partial fluid/air exchange. No adjunct procedure was performed as laser treatment or gas tamponade or ILM peeling.

Results: The subretinal fluid gradually resolved after the surgery and complete resolution was achieved at 8 months and vision improved to 6/24. No recurrence was noted after 2 years of follow-up.

Conclusion: Inner retinal fenestration offers a promising alternative to previously

described techniques for the management of ODPM. It may help to reverse the fluid flow from the pit to the vitreous cavity preventing recurrence of the fluid accumulation. The technique is simple without the need of further manoeuvres as laser or ILM peeling or gas tamponade.

Financial Disclosure: No

Abstract Submission 2022 From: Karina Spiess

Session Choice: Rapid Fire Session 3' surgical videos : "A great surgical tip… which I learnt from…"

Co Author(s): Mostafa A. Elgohary

Abstract Title: The blue smoke signal

Purpose: We present two cases of recurrent retinal detachment after silicone oil removal due to unidentified breaks. The intraoperative videos show the main steps of the dye-extrusion-technique(DE-TECH) and how it successfully identified an occult break within an area of chorioretinal atrophy and an insufficiently treated anterior edge of a previous retinectomy.

Setting/Venue: The Royal Eye Unit, Kingston Hospital, Kingston-upon-Thames

Methods: After careful internal search, no obvious cause of recurrent retinal detachment could be found. Subretinal dual-blue injection with a 38g-cannula followed by perfluorocarbon liquid assisted extrusion of the stained subretinal fluid lead to identification of a retinal break within a preexisting chorioretinal atrophy patch in case 1, and a insufficiently treated anterior edge of a previous retinectomy in case 2. In both patients, the area of dye-leakage could be successfully treated with cryotherapy and SF6 gas tamponade, with good anatomical outcome and improvement of vision. Visual acuity after 3 and 2 months was 6/18 and 6/36, respectively.

Results: The dye-extrusion technique involves the injection of subretinal dye and extrusion through occult breaks with the help of perfluorocarbon liquid and dynamic scleral indentation. This is a simple and effective technique which facilitates the identification of retinal breaks in cases with small microbreaks, poor fundal view or presence of a chorioretinal scar or staphyloma. After treating the causative retinal breaks, it is important to remove the residual stained subretinal fluid due to the potential of the dye causing retinal toxicity.

Conclusion: DE-TECH is helpful in identifying occult breaks in patients with poor funds view, retinal microbreaks or as in our cases, breaks located within an area of severe chorioretinal atrophy or the unusual scenario of insufficient retinopexy to the lateral and anterior edge of a retinectomy.

Financial Disclosure: No

Abstract Submission 2022 From: Kanmin Xue

Session Choice: Rapid Fire Session 3' surgical videos : "A great surgical tip… which I learnt from…"

Co Author(s): Chetan K. Patel

Abstract Title: Treating postoperative hypotony by ciliary body membrane removal

Purpose: Chronic hypotony following complex retinal surgery or uveitis can lead to phthisis. Here, we demonstrate endoscopic assessment and surgical dissection of ciliary body membranes in a patient with chronic hypotony after extensive surgery for proliferative vitreoretinopathy, leading to recovery of intraocular pressure (IOP) and best-corrected visual acuity (BCVA).

Setting/Venue: Oxford Eye Hospital, Oxford University Hospitals NHS Foundation Trust, UK

Methods: In the surgical video, the intraocular lens and capsule were removed. Endoscopic assessment of the ciliary body demonstrated 360-degree circumferential loop of fibrotic membranes overlying the ciliary processes. This was dissected using a combination of forceps, scissors and MVR blade, assisted by iris hooks and deep scleral indentation. The retina remained attached throughout and air-gas (20% SF6) exchange was performed. Topical dexamethasone and cyclopentolate drops were given post-operatively.

Results: The 56-year-old post-myopic LASIK patient had a baseline IOP of 10 mmHg in the affected eye prior to retinal detachment surgeries. Despite retinal re-attachment, he developed chronic hypotony (IOP 0-2 mmHg) associated with loss of vision (from 6/18 to perception of light) over 3 months, which was resistant to medical therapy. Ultrasound biomicroscopy suggested the presence of a membrane over the ciliary body with regions of supraciliary detachment, thus prompting surgery to relieve suspected traction. By 4 weeks post-membrane removal, IOP improved to 8 mmHg with resolution of choroidal folds and BCVA improvement to 6/40 (aphakic).

Conclusion: Removal of epiciliary membrane may be an effective treatment for chronic hypotony due to tractional membrane over the pars plicata.

Financial Disclosure: No

Abstract Submission 2022 From: Konstantinos Stamoulas

Session Choice: Rapid Fire Session 3' surgical videos : "A great surgical tip… which I learnt from…"

Co Author(s): Aman Chandra

Abstract Title: Two step approach for early suprachoroidal haemorrhage drainage following complicated cataract surgery

Purpose: To present a case of suprachoroidal haemorrhage drainage with the use of tissue plasminogen activator

Setting/Venue: Southend University Hospital Eye Unit

Methods: This is a case of a 77 year old female who underwent cataract surgery that

was complicated by suprachoroidal haemorrhage (SCH). An early intervention three days after surgery for SCH drainage with a two step approach was undertaken. Initially, 100 µg/0.1ml of tissue plasminogen activator (t-PA) were injected into the suprachoroidal space. This was followed by SCH drainage and complete 25G pars plana vitrectomy six hours later.

Results: At first day post-op visual acuity improved from perception of light to counting fingers. Early intervention with the use of tissue plasminogen activator can facilitate SCH drainage and may help reduce visual morbidity. Advantages of t-PA are the ease of administration and the widespread availability.

Conclusion: A two-step approach for early SCH drainage with the use of t-PA may lead to improved visual outcome.

Financial Disclosure: No

Abstract Submission 2022 From: Pallavi Tyagi

Session Choice: Rapid Fire Session 3' surgical videos : "A great surgical tip… which I learnt from…"

Co Author(s): N/A

Abstract Title: Haptic positioning in scleral pockets in Carlevale lens: Troubleshooting tips

Purpose: Describing two different approaches in haptic placement in scleral pockets in Carlevale lens

Setting/Venue: Central Middlesex Hospital/ Hillingdon Hospital

Methods: Video presentation of two surgical techniques of creating scleral pockets for Carlevale lens implantation In first technique, scleral pockets were created with radial incision. Two problems were encountered with this technique. 1. When T shaped haptic was externalised, the flanges of haptic oriented parallel to radial incision. It was difficult to determine which way to rotate in order to lay the flanges perpendicular to insert into scleral pockets. This problem was overcome by using torque of haptic and retraction for correct orientation. 2. Once flanges of haptic were buried in scleral pocket, the stem of T remained protruded above scleral surface. This problem was sorted by scleral sutures. In second video, the scleral pockets were created with circumferential incision parallel to limbus. None of the above two problems occurred with this technique. Additionally, the handshake technique with two IOL forceps also improved control with externalisation and positioning of soft IOL haptic.

Results: These videos show different ways of creating scleral pockets and haptic manoeuvring in Carlevale lens. These techniques with reduce chances of haptic breakage, disorientation, slippage and exposure.

Conclusion: The surgical outcome of Carlevale lens is improved by perfect placement of IOL haptics in scleral pockets

Financial Disclosure: No

Abstract Submission 2022 From: Max Davidson

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): Jufen Zhang Aman Chandra

Abstract Title: Outcomes and risk factors for late intraocular lens dislocation.

Purpose: Late intraocular lens (IOL) dislocation is a rare but serious complication of cataract surgery and is often managed with pars plana vitrectomy (PPV) and IOL exchange. A retrospective analysis was performed to examine risk factors and outcomes at a single unit in the UK.

Setting/Venue: Data was obtained from Southend University Hospital and Orsett Hospital, part of Mid & South Essex University Hospitals NHS Trust.

Methods: Cases of IOL exchange undertaken at our unit between June 2018 and October 2021 were identified. Demographics, best-corrected visual acuity (BCVA) and surgical outcomes were recorded. Past medical and ocular history were interrogated and univariate regression analysis was performed against a control cohort to identify risk factors for late IOL displacement (LIOLD).

Results: 29 eyes were identified who underwent PPV for management of LIOLD. Median (IQR) BCVA significantly improved by 5 lines, from 0.8 (0.4-1.0) at presentation to 0.3 (0.2-0.8) LogMAR units after IOL exchange (p=0.024). Eighteen secondary IOLs (62%) were fixated to the anterior chamber and 6 (21%) to the sclera. Risk factors for the development of LIOLD were identified as younger age at cataract surgery, male sex, axial myopia, ocular hypertension or a history of PPV, complicated cataract surgery or zonule damage.

Conclusion: IOL exchange is a successful management option for patients with IOL dislocation. Risk factors are known to vary widely by geographical location and our study contributes significant UK-based data to this discussion. Future studies may look at prevention for at-risk individuals and compare outcomes of different IOL fixation techniques.

Financial Disclosure: No

Abstract Submission 2022 From: Rubina Rahman

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): Varshini Manoharan, Ophthalmology ST5

AbstractTitle: Evaluation of surgical outcomes of scleral fixation with Carlevale Intraocular lens (IOL) in a real world district general hospital setting

Purpose: To evaluate the surgical outcomes & potential complications of scleral fixation using the novel approach of a single piece intra-ocular lens (IOL), the Carlevale IOL

Setting/Venue: Calderdale & Huddersfield NHS Foundation Trust

Methods: This retrospective series assesses 29 eyes of 28 patients over a 19 month period, from September 2020 to May 2022. Patients had insertion of Carlevale IOL under local (26) or general (3) anaesthetic. The IOL was inserted into the posterior chamber through a corneal wound and secured into place via scleral pocket incisions. Visual acuity assessment, slit lamp examination, intra-ocular pressure (IOP) check and OCT macula were completed for all patients during follow up visits.

Results: Indicationsfor Carlevale IOL in thisstudy included IOL subluxation(8), IOL opacification(3), aphakia(16) and trauma associated phacodenesis(2). Patients were followed up for an average of 7 months post-procedure. The mean corrected distance visual acuity was 1.44 ± 0.69 logMAR preoperatively at listing visit and improved to 0.63 ± 0.69 logMAR at final follow up. Mean IOP improved from 17 to 15 post-operatively. Mean central macula thickness improved from 312.18 ±86.12µ pre-operatively to 293.19 ±36.75µ post-operatively. Complications observed in this group of patients included raised IOP(4), hyphaema(1), prolonged post-operative inflammation(1), cystoid macular oedema(3) and spontaneously resolving vitreous haemorrhage(3).

Conclusion: Insertion of Carlevale IOL showed notable visual improvement with few complications in this series of patients. This study demonstrates this novel technique is an excellent option for patients requiring secondary IOL with inadequate capsular support.

Financial Disclosure: No

Abstract Submission 2022 From: Paul-Eduard Stanciu

Session Choice: Rapid Fire Session 3’ surgical videos / 3’ case reports/case series – MISCELLANEOUS

Co Author(s): Mr Stephen Winder

Abstract Title: Carlevale - safe and sound!

Purpose: To do a service evaluation of the Carlevale IOLs that were implanted at Royal Hallamshire Hospital in Sheffield. We present an edited video of a surgical case in which we are emphasizing on the steps of implantion of a Carlevale lens.

Setting/Venue: Video presentation of a surgical case + Audit of Carlevale IOLs – Royal Hallamshire Hospital, Sheffield

Methods: We have recorded and edited a video of one of our patients for whom we have implanted a Carlevale (Soleko) lens. The video was recorded for training. This video emphasises that this type of surgery is relatively easy with minimally invasive implantation when performed by an experienced surgeon. We have also done a retrospective evaluation of the patients (25 eyes of 23 patients) that underwent 25 Ga Carlevale lens implantation with scleral pockets at Royal Hallamshire Hospital in Sheffield between 2021-2022 with post-op follow up between 2 to 18 months. We looked at gender,

age, indication for surgery, post-op visual acuity and complications.

Results: ▪ 64% male, 36% female ▪ Age (range 37-87 y o; average 64.8 y o) ▪ Indications: 72% Dislocated IOL, 16% Dislocated Natural lens, 12% Aphakia with zonular dehiscence ▪ Vision: ▪ 25% 6/6 or 6/7.5 ▪ 25% 6/9 ▪ 25% 6/12 ▪ 25% 6/18 ▪ 1 patient had its surgery recently done with final post-op vision unknown for now ▪ Complications 20% of cases: ▪ 1/25 hyphema (cleared) ▪ 1/25 vitreous haemorrhage (cleared) ▪ 1/25 anterior uveitis (cleared with drops) ▪ 1/25 reverse pupil block (YAG PI) ▪ 1/25 T-shaped plug exposure under conjunctiva with rhegmatogenous retinal detachment (vitrectomy) Our patients had similar complication rates and visual outcomes to those previously reported in the literature.

Conclusion: The Carlevale lens is designed for sutureless intrascleral fixation and can be successfully used in a variety of indications when the scleral support is absent or insufficient to hold a sulcus IOL. Complications occurred in few cases and were mainly successfully managed. There was a good visual outcome in most of our cases with poorer results in those with prior diabetic maculopathy, glaucoma, high myopia associated maculopathy, retinal detachment. Implanting a Carlevale lens is a safe and sound operation with good visual outcomes when performed with delicate manipulation by surgeons with experience.

Financial Disclosure: No

Abstract Submission 2022 From: Anthony Shinton

Session Choice: Rapid Fire Session 3’ surgical videos / 3’ case reports/case series – MISCELLANEOUS

Co Author(s): Abbas Fahem, Grace Kiew, Bhagyashree Joshi, Stephen C Lash

AbstractTitle: Sutureless intrascleral haptic fixated intraocular lenses: the

Southampton experience

Purpose: The Yamane technique for

performing sutureless intrascleral haptic fixation (ISHF) of an intraocular lens was first described in 2014. Our unit subsequently adopted and modified the technique, and we have now performed over 200 cases. To our knowledge, this is the largest reported series of secondary intraocular lens implantation using the sutureless ISHF technique.

Setting/Venue: University Hospital Southampton NHS Foundation Trust, and Optegra Eye Hospital Hampshire.

Methods: The first 200 cases of ISHF surgery performed by a single surgeon (SL) in both NHS and private practice were retrospectively identified. All cases with data available were included. Each case note was individually reviewed using the electronic patient record, and relevant data extracted and analysed.

Results: 200 eyes of 194 patients underwent ISHF surgery during a 5-year period. Median age at

surgery was 73 years (range 18 - 100). Median postoperative follow-up duration was 7.7 months. ISHF was typically combined with 23-gauge pars plana vitrectomy (unless previously vitrectomised). Prior to surgery, 120 (60%) eyes were pseudophakic, 59 (29.5%) were aphakic, and 21 (10.5%) were phakic. The most common indications for ISHF surgery were subluxed or dropped IOL (n=71), opacified IOL (n=49), and previous complicated cataract surgery (n=48). 127 (63.5%) eyes had a significant ocular co-morbidity, including previous retinal detachment (n=36), previous ocular trauma (n=23), and glaucoma (n=22). During ISHF surgery, a new 3-piece IOL was inserted in 173 eyes, and the existing IOL was reused in 15 eyes. The most common postoperative complications were cystoid macular oedema (n=40, 20%), IOP rise (n=12, 6%), and iris capture (n=7, 3.5%). 11 (5.5%) eyes required ISHF revision or re-do surgery. Median preoperative visual acuity was 0.78 LogMAR, and median final postoperative visual acuity was 0.26 LogMAR.

Conclusion: The sutureless ISHF technique has been used in a wide range of eyes, with promising results from our first 200 cases. We note a high rate of postoperative CMO (20%), but must remember that eyes undergoing ISHF surgery are inherently complex, with many having a history of trauma, retinal detachment, or surgical complications. Efforts are now focused on measures to reduce the rate of postoperative CMO.

Financial Disclosure: No

Abstract Submission 2022 From: Francesco Maria D'Alterio

Session Choice: Rapid Fire Session 3’ surgical videos / 3’ case reports/case series – MISCELLANEOUS

Co Author(s): Joshua Feyi-Waboso Salem Murjaneh

Abstract Title: Real-life outcomes of sutureless scleral-fixated intraocular lenses implantation using Yamane’s technique.

Purpose: To evaluate visual and anatomical outcomes of sutureless scleral-fixated intraocular lenses (IOLs) in a real-life setting.

Setting/Venue: Eye Unit, Royal Cornwall Hospitals NHS Trust, Truro, UK

Methods: Retrospective consecutive case series. Data from patients underwent secondary sutureless scleral-fixated (SSF) IOL implant with Yamane’s technique between July 2017 and June 2022 were collected using the Electronical Medical Records software (Medisoft). Patients with a minimum 2 months follow-up were included in the analysis. The main outcome measures were: best corrected visual acuity (BCVA) and IOL stability at last follow-up. Information about baseline patient demographics, biometry parameters, surgical indications and post-operative complications were also collected. Data is presented as mean ±SD or percentage. Differences were assessed by t-test (significant p-value <.05) and correlations investigated with cox regression analysis.< />strong>

Results: N=47 SSF-IOL implants were performed and mean follow-up was 11.85 months (range 2 – 38.5). Mean patients age at baseline was 67.36 ± 15.49 years (27 M and 20 F). 14.89%, 21.28%, 46.81% and 17.02% of patients underwent the procedure due to cloudy IOL, previous complicated

cataract surgery, dislocated IOL and traumatic crystalline lens dislocation respectively. Mean axial length was 24.28 ± 1.96 mm and mean K1, K2 and white-to-white (WTW) were 42.47 ± 1.88 D, 44.19 ± 1.62 D and 11.93 ± 0.38 mm respectively at baseline. 5 eyes were excluded from VA analysis due to eye disease at baseline affecting the visual function (3 corneal decompensation, 1 amblyopia and 1 optic neuropathy). BCVA significantly improved from 1.15 ± 0.87 to 0.26 ± 0.26 (p<.0001). sf-iols were stable in 91.49% and unstable 8.51% (2 decentred 2 twisted) of patients after single surgery at last follow up. further corrective was required the with iols. no significant correlations detected between iols demographic, clinical or biometry parameters. 6 eyes (12.77%) developed cystoid macular oedema which resolved during up all cases 1 eye (2.13%) glaucoma that controlled by topical treatment. < />strong>

Conclusion: SSF-IOL technique provided significant visual improvement and good IOL stability with a good safety profile in our cohort of patients in a UK hospital setting. No predisposing factors were found for unstable IOLs and further studies are needed to investigate this point.

Financial Disclosure: No

Abstract Submission 2022 From: MOHAMED ELNAGGAR

Session Choice: Rapid Fire Session 3’ surgical videos / 3’ case reports/case series – MISCELLANEOUS

Co Author(s): O. Jamall, L. Wickham, L. DaCruz, J. Bainbridge, E.Ezra, P. Sullivan, D. Charteris, M. Muqit, R. Henderson, M. Minihan.

Abstract Title: Vitreo-Retinal (VR) Cataract Audit - Moorfields Eye Hospital (MEH) 2021

Purpose: 1) To assess Posterior Capsule Rupture (PCR) and Visual Acuity (VA) loss rate in patients undergoing cataract surgery under the VR Department at MEH in 2021. 2) To compare rates with the National Ophthalmology Database (NOD). 3) To create a new database with these statistics for patients with VR disorders.

Setting/Venue: Moorfields Eye Hospital (MEH)

Methods: A retrospective review of cataract surgeries performed by the VR department from 1st January 2021 to 31st December 2021 was carried out. Inclusion criteria were: Phacoemulsification or combined phacovitrectomy cases performed by all levels of surgeons. Exclusion criteria were: Any other form of cataract surgery (e.g. planned lensectomy or extracapsular/ intracapsular cataract extraction) or pre-operative trauma causing lens capsule injury. Data was collected from the Electronic Medical Records and compared to NOD and data from previous MEH VR cataract audits.

Results: A total of 585 cases were included in the analysis. 32% of cases were phacoemulsification surgery only and 68% were combined phacoemulsification and VR surgery. The PCR rate was 2.56% (NOD 1.14%), whilst the VA loss rate was 3.2% (NOD 0.51%).

Conclusion: PCR and VA loss rates were higher than NOD, however, NOD excluded combined surgeries. Nearly all cases of vision loss were related to retinal condition rather than surgery. The

complexity of cases increased PCR risk. This audit can be used to formulate a new database for future standards for comparison.

Financial Disclosure: No

Abstract Submission 2022 From: Christopher Holmes

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): E Hughes

Abstract
Title: Pupil Block Causing Angle Closure due to Migration of a Dislocated Posterior Chamber Intra-Ocular Lens Implant

Purpose: To report a previously undescribed case of pupil-
block due to anterior migration of a completely dislocated posterior chamber intraocular lens (IOL) i mplant in a vitrectomised eye. Anterior dislocation of IOLs causing pupil-block has been described, but this case is the first with previously known complete posterior IOL dislocation

Setting/Venue: Sussex Eye Hospital, Brighton, UK

Methods: Retrospective case report of a subject who presented with complete posterior IOL dislocation in their only eye after previous vitrectomy cryotherapy and gas and subsequent uncomplicated phacoemulsification + IOL. Shortly after listing for scleral fixated IOL (SFIOL) the patient presented with pain and reduced vision, and was found to be
in pupil block due to anterior migration of the IOL, with an intraocular pressure (IOP) of 65. The patient did not respond to maximum medical therapy and YAG laser peripheral iridotomy (PI), and so underwent emergency IOL removal.

Results: Pupil-block due to anterior migration of a completely dislocated IOL in a vitrectomised eye is a rare complication, but outcomes can be poor. The risk should be considered when counselling patients, and they should be advised to avoid face down positioning. A prophylactic PI may be helpful in high-risk patients

Conclusion: Pupil-block due to anterior migration of a completely dislocated IOL in a vitrectomised eye is a rare complication, but outcomes can be poor. The risk should be considered when counselling patients, and they should be advised to avoid face down positioning. A prophylactic PI may be helpful in high-risk patients

Financial Disclosure: No

Abstract Submission 2022 From: Peng Yong Sim

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): Shahanaz Ahmed, Jason Ho

Abstract
Title: Visual outcomes of pars plana vitrectomy for dropped nucleus after phacoemulsification

Purpose: To determine the prognostic factors
and visual outcomes of pars plana vitrectomy (PPV) for dropped nucleus after complicated phacoem ulsification (PE).

Setting/Venue: Tertiary eye hospital and referral centre in London, UK.

Methods: Consecutive case notes of patients with complicated PE who underwent subsequent PPV for removal of dislocated lens fragments over a 5-year period (January 2017 to December 2021) were identified using a treatment register and retrospectively analysed. Data including patients' demographics, pre- and postoperative vision, risk factors for lens fragment dislocation, and intra- and postoperative complications were recorded.

Results: 100 patients (mean age 71 ± 11.5 years; 42% female) were included in this study with a mean follow-up duration of 12 (range 0.4–58.7) months. The mean interval between complicated PE and PPV was 12.4 (range 0–163) days. The pre-operative mean best corrected visual acuity (VA) was 1.03 ± 0.94 logMAR, which significantly improved to 0.49 ± 0.65 logMAR post-PPV (p<.01). risk factors for lens fragment dislocation included white cataract (16%), previous vitrectomy (14%), small pupil (11%), and pseudoexfoliation (5%). simple multiple regression analyses showed only better preoperative va to be significantly associated with final (p="0.01)." the timing of ppv, intraocular status at time complicated pe pre- postoperative pressure were not visual outcome. < />strong>

Conclusion: PPV for dropped nucleus after complicated PE resulted in improved VA. Better preoperative VA was associated with better final visual outcome.

Financial Disclosure: No

Abstract Submission 2022 From: Huda Al-Hayouti

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): Alasdair Simpson Kanna Ramaesh Shohista Saidkasimova

Abstract Title: Use of adjunctive DALK in corneal opacity to allow retinal detachment repair

Purpose: To presenting a novel approach for managing retinal detachment in the
presence of dense corneal scaring and no view of the fundus

Setting/Venue: Gartnavel General Hospital - Glasgow

Methods: A 30 years old female patient, known to have bilateral congenital aniridia with subsequent corneal opacity, presented with persistent flashing of lights and had progressed to a shadow in the right eye that gradually enlarged over the course of a week. On presentation, her

visual acuity was hand motion in the right eye and 2/60 in the left eye. She had bilateral dense corneal opacity precluding adequate examination of the posterior segment. B-scan ultrasonography revealed right superior bullous retinal detachment.

Results: The surgery was performed in 3 stages: The first stage was deep lamellar dissection of the opacified corneal stroma, leaving a thin layer of deep stroma, Descemet's membrane and endothelium. This allowed for adequate view to proceed with the second stage: phacovitrectomy Phacoemulificiation was complicated by pre-existing superior zonule dehiscence but was completed with implantation of 3-piece intraocular lens in the capsular bag and was followed by uneventful pars plana vitrectomy, cryotherapy and SF6 gas. The third stage of the keratoplasty was completed with suturing the donor corneal stromal button to the recipient cornea.

Conclusion: Deep anterior lamellar keratoplasty offers an excellent alternative to temporary keratoprosthetics in cases that require pars plana vitrectomy associated with corneal opacity.

Financial Disclosure: No

Abstract Submission 2022 From: Katarzyna Chwiejczak

Session Choice: Rapid Fire Session 3’ surgical videos / 3’ case reports/case series – MISCELLANEOUS

Co Author(s): N/A

Abstract Title: Management of a macular fold: effort worth taking . A case report

Purpose: Macular fold is a rare, probably underreported, serious complication of a macula off retinal detachment repair. Cases of spontaneous improvement were described, but if left untreated it can cause debilitating visual distortion and limited visual acuity. We present technique and result of a macular fold repair.

Setting/Venue: York and Scarborough Teaching Hospitals NHS Foundation Trust

Methods: A case report of a 55 year-old male patient, referred with a full thickness macular fold following left macula off RRD repair with vitrectomy (ppV), cryotherapy and SF6 gas, performed 9 days before (March 2022). This was his amblyopic eye. VA was 6/24 in the left eye. The retina was attached, but he complained of a black line across his vision. PPV with subretinal injection of balanced salt solution(BSS), internal limiting membrane (ILM) peeling, intraoperative massage with heavy liquid and SF6 gas tamponade was performed 12days after the original vitrectomy. Patient consented to the use of imaging and video recordings.

Results: The macular fold resolved completely following the surgery. Even though visual acuity did not improve and was 6/24 at postoperative visit, possibly due to preexisting amblyopia and cataract formation, patient was very satisfied with the result.

Conclusion: Pars plana vitrectomy with ILM peeling, subretinal BSS, intraoperative massaging with heavy liquid and gas tamponade is a useful technique in management of a macular fold and can be used in this impairing condition.

Financial Disclosure: No

Abstract Submission 2022 From: Jaidip Gill

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): Palpandian Viswanathan

AbstractTitle: Macular folds following retinal detachment surgery: Outcomes from cases managed c onservatively and surgically.

Purpose: To analyse the visual and structural outcomes of management of eyes with macular folds following vitrectomy for retinal detachment.

Setting/Venue: The Royal Shrewsbury Hospital, UK. Single surgeon case-series.

Methods: Retrospective cohort study. The electronic patient records of consecutive patients who developed macular folds following vitrectomy for retinal detachment (RD) from 01 Jan 2019 to 08 Aug 2022 were reviewed. Demographic data, configuration of retinal detachments, timing of corrective surgery, tamponade agent, post-op posturing instructions, intra- and post-operative complications, best-corrected visual acuity (BCVA), and presence of distortion were collected. OCT and fundal images at onset and final follow up were analysed. Primary outcomes were presence of visual distortion and BCVA. Secondary outcomes were resolution of folds on OCT and intra- or post-operative complications.

Results: 6 patients (4 males, median age 57) were included. All the cases were superior bullous retinal detachments and 3 were "macula off". Baseline pre-op visual acuity was 0.97 (0.0-1.3). All patients had primary vitrectomy, cryotherapy and gas tamponade with face down posturing for 24 hours followed by posturing to tamponade break. 4 patients had significant post-op visual distortion. 3 patients were treated surgically. 2 patients treated surgically had improvement in their distortion and anatomical resolution of the folds as seen on OCT. 1 patient required further vitrectomy and silicone oil to flatten the fold to improve distortion but did not improve his final BCVA. Final BCVA was 0.53 (0.1-1.1). All observed patients also showed resolution of the retinal fold and resolution and distortion.

Conclusion: Superior bullous retinal detachments are at risk for macula folds post operatively irrespective of macula on or off status. Intraoperative measures to be taken to avert retinal folds. Surgery can be considered to treat visual distortion affecting BCVA but no intervention is also an option as patients who were observed also showed resolution of their distortion over time. Other factors to consider when deciding to operate are the visual potential and patient choice. If surgery is decided, patients should be counselled for significant risks and complications of further vitrectomy, persistence of distortion and re-operations in the event of recurrence of folds.

Financial Disclosure: No

Abstract Submission 2022 From: Abin Holla

Session Choice: Rapid Fire Session 3’ surgical videos / 3’ case reports/case series – MISCELLANEOUS

Co Author(s): Shinton A, Gupta B, Antonakis S,Lash S

Abstract Title: Retinal Folds - Detach and Leave…Video Presentation

Purpose: To demonstrate a planned macular detachment to treat retinal folds as a result of a previous vitrectomy.

Setting/Venue: Southampton Eye Unit- Vitreoretinal services

Methods: A man developed symptomatic retinal folds followig an ERM peel. He underwent a repeat vitrectomy with subretinal injection of BSS ith a 41G cannula to induce a macular detachment which was allowed to spontaneously resolve.

Results: The macula flattened resulting in the ironing out of the retinal fold improving the retinal architecture and symptoms.

Conclusion: Macula detachment by subretinal injection of BSS using a 41g cannula is a safe and effective way in treating retinal folds

Financial Disclosure: No

Abstract Submission 2022 From: Matteo Mario Carlà

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Caporossi Tomaso Baldascino Antonio Gambini Gloria De Vico Umberto Governatori Lorenzo Scampoli Alessandra Ripa Matteo Rizzo Stanislao

AbstractTitle: Treatment of recurrent high myopic macular hole and associated retinal detachment with human amniotic membrane

Purpose: To determine the efficacy of human amniotic membrane to close macular hole retinal detachment in high myopic eyes.

Setting/Venue: Fondazione Policlinico Universitario "A.Gemelli", IRCCS

Methods: We collected 19 high myopic eyes of 19 patients affected by macular hole retinal detachment already underwent vitrectomy with internal limiting membrane peeling. Patients underwent vitrectomy with amniotic membrane transplantation.

Results: Primary success rate was achieved after 3 months in 89.5% (17 on 19 eyes) and final macular hole closure was obtained in 18 on 19 eyes (94.7 %).Final retinal reattachment rate was 100%. Final 12-month mean BCVA improved from 20/2000 (2 logMAR) to 20/250 (1.1 logMAR). OCT-angiography revealed a high correlation between

superficial and deep capillary plexus and final BCVA.

Conclusion: HAM patch is an efficient substrate to
manage macular hole retinal detachment in high myopic eyes, resulting in encouraging anatomical results and BCVA recovery.

Financial Disclosure: No

Abstract Submission 2022 From: David Yorston

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): none

Abstract Title: Does routine use of inverted ILM flap improve outcomes in large macular holes?

Purpose: To determine if use of inverted ILM flap improves outcomes in large (>500microns) FTMH in routine NHS practice.

Setting/Venue: Gartnavel Hospital, Glasgow

Methods: Single surgeon, non-randomised comparative case series, using the BEAVRS FTMH database. Primary outcome was hole closure after one operation. Secondary outcomes included final visual acuity and change in visual acuity. All eyes had 14% C2F6 tamponade, and were positioned face down for 24 hours after surgery. All data were analysed by intention to treat rather than successful completion of ILM flap.

Results: Before 30/9/19, all FTMH >500 microns had a complete ILM peel (78 eyes - Group 1). After 1/10/19, all FTMH >500microns had an inverted ILM flap (53 eyes - Group 2). Age, sex, lens status, and median hole diameter were similar in both groups. The median duration was 6 months in group 1 and 10 months in Group 2 (p=0.02, Mann-Whitney U-test). Mean pre-op VA was 1.1 LogMAR in Group 1 and 1.23 in Group 2 (p=0.04). Closure rates were 66/78 (84.6%) in Group 1 and 51/53 (96.2%) in Group 2 (p=0.044, Fisher's exact test). Median follow-up was 190 days in group 1 and 171 days in group 2 (p=0.25, Mann-Whitney U-test). In 121 eyes with at least eight weeks follow-up, the mean post-operative visual acuities were 0.60 LogMAR in group 1 and 0.58 in group 2. Mean visual improvement was 0.51 LogMAR in group 1 and 0.67 in group 2 (p=0.042). In eyes with successful primary closure, vision improvement was 0.58 LogMAR in group 1 and 0.69 in Group 2 (p=0.1).

Conclusion: The two groups had similar pre-operative characteristics, but primary closure rates were higher in Group 2. There was little difference in visual outcomes as open holes had revision surgery which was successful in most cases. However, Group 2 had longer duration and worse pre-operative visions, which would be expected to lead to worse post-operative
vision. Routine use of ILM flap in holes >500microns increases closure rates, and
may improve visual outcomes.

Financial Disclosure: No

Abstract Submission 2022 From: Iacopo Macchi

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Roxane J. Hillier, Tafadzwa Young-Zvandasara, Muhammad Cheema, Muhammad Fawad, Harshika Chawla, Vishal Vohra

Abstract Title: Comparison of four surgical internal limiting membrane peel techniques for the management of large primary full thickness macular holes.

Purpose: To compare anatomical and functional outcomes of four different surgical techniques for the management of large primary idiopathic full t hickness macular holes (FTMH). Surgical techniques examined were: standard internal limiting membrane (ILM) peel, ILM with hinged flap ("on-the-hole technique"), ILM free flap ("in-the-hole technique") and ILM inverted flap ("hybrid technique")

Setting/Venue: Newcastle Eye Centre, Newcastle upon Tyne, UK

Methods: This is a retrospective, consecutive, non randomised comparative study. 116 eyes which had undergone primary vitrectomy + ILM peel+ gas for large (>500 microns) idiopathic FTMH between January 2017 and May 2022 were included. All eyes were pseudophakic at the end of surgery. 54 eyes had undergone standard ILM peel (group 1), 31 eyes hinged flap (group 2), 14 eyes free flap (group 3) and 17 eyes inverted flap (group 4). The primary outcomes were anatomical closure rates assessed by optical coherence tomography and change in best corrected visual acuity (BCVA) at minimum 2 months follow up.

Results: Anatomical success rates were significantly higher in groups 2 (96.8%), 3 and 4 (both 100%) compared to group 1 (61.1%) ($p<.004$). no statistical significant difference between group 2,3 and 4 ($p>0.05$).Amongst successful surgeries, mean BCVA (Logmar) changed from 1.08±0.47 to 0.68±0.41 (group 1), from 1.17±0.55 to 0.62± 0.27 (group 2), from 1.03±0.44 to 0.77±0.49 (group 3) and from 1.09±0.47 to 0.58±0.17 (group 4).No statistically significant difference was found between any group ($p>0.05$). There was, however, a trend towards superiority of both hinged flap alone and hinged + inverted flap over free flap in terms of BCVA improvement ($p=0.06$).

Conclusion: Modified ILM peel techniques were more successful than standard ILM peel in achieving anatomical success. They are therefore strongly recommended in FTMH >500 microns. 'On-the-hole' techniques may offer greater BCVA gains than 'in-the-hole' techniques.

Financial Disclosure: No

Abstract Submission 2022 From: Mohammed Elsayyed

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Alistair Laidlaw, Luke Membrey and Timothy Cochrane

Abstract Title: Associations and Prognosis of Full-Thickness Macular Hole Associated with Epiretinal Proliferation

Purpose: Epiretinal proliferation (EP) was originally described in association with lamellar macular holes, but later found to also be associated with full thickness macular holes (FTMH). The prognostic value of this FTMH-associated EP is unknown. We explored whether EP has a significant effect on the outcome of FTMH surgery.

Setting/Venue: Retrospective case-control study

Methods: Eighty-eight sequential eyes with FTMH operated between January 2018 and December 2021 in Maidstone were included in the study. These eyes underwent pars plana vitrectomy, internal limiting membrane peeling and gas tamponade. Clinical examination and optical coherence tomography scans have been performed pre- and post-operatively

Results: Eleven patients (12.5%) had FTMH-associated EP. Patients were older (P<.001) in the ep group. more patients were males group (54.5% vs 31.2%) but without statistical significance (p="0.289)." minimal linear diameter and preoperative visual acuity similar both groups 0.955 respectively). all 11 holes 72 (93.5%) non-ep achieved single-surgery closure. regarding type of hole closure postoperative improvement eyes with significantly likely to have concurrent epiretinal membranes (36.4% 1.3%, p<0.001) < />strong>

Conclusion: Patients with FTMH were significantly older in the EP group and had a significantly higher rate of concurrent ERM. Otherwise, there was no significant correlation with sex, macular hole size or preoperative visual acuity. Surgery for FTMH associated with EP was not correlated with any poor anatomical or visual outcome

Financial Disclosure: No

Abstract Submission 2022 From: George Moussa

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Assad Jalil FRCOphth Niall Patton MD, FRCOphth Francesco Sabatino MD FEBO Kirti Jasani FRCOphth Felipe Dhawahir-Scala FRCOphth David Cordeiro Sousa FRCOphth Tsveta Ivanova MD PhD

Abstract Title: Prediction of macula hole size progression based on baseline Optical Coherence Tomography findings?

Purpose: To quantify the rate of idiopathic-macular-holes (IMH) progression from presentation and identify factors that may influence stratification and urgency for surgical listing based on the initial Optical Coherence Tomography (OCT) scans.

Setting/Venue: Manchester Royal Eye Hospital

Methods: The Minimal-linear-diameter [MLD], basal-diameter [BD] and Hole-Height on nasal and temporal sides of IMH were measured on spectral-domain-OCTs, on initial presentation and just prior to surgery. Mean-Hole-Height, Hole-Height Asymmetry (HHA, absolute difference between Nasal-Temporal Height), MLD/BD and MLD change-per-day (MLD/day) were calculated for each patient. Multivariable linear regression analysis with MLD/day as the dependent variable were performed to identify significant risk factors for MLD progression. MLD were grouped to quintiles: 1:≤290, 2: >290 and ≤385, 3:>385 and ≤490, 4:>490 and ≤623 and 5:>623µm.

Results: In 161 eyes (157 patients), we report significant associations with MLD/day: i) MLD/BD (p=0.039) [i.e. wide BD relative to MLD lead to faster progression of MLD], ii) HHA (p=0.006) [larger absolute difference between nasal and temporal hole height lead to faster progression], iii) days-between-scans (p<.001) [longer duration between scans had reduced mld />day, indicating more rapid increase initially then a plateaux], and relative to MLD-Quintile-1, ii) MLD-Quintile-3 (p=0002) and MLD-Quintile-4 (p=0008), MLD-Quintile-5 (p<.001) all lead to reduced mld />day rate on multivariable regression.

Conclusion: In addition to finding that the previously reported initial smaller MLD is a risk factor for rapid MLD progression, we report two novel findings, that large HHA and a low MLD/BD (wide base relative to MLD), represent significant risk factors. These factors should be taken into consideration on presentation, to stratify timing of surgery.

Financial Disclosure: No

Abstract Submission 2022 From: Christopher Holmes

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): A Fonseca E Hughes

Abstract Title: A Retrospective Cohort Study Assessing the use of Topical Ketorolac after Pars Plana Vitrectomy and Epiretinal Membrane Peel

Purpose: To determine if post-operative topical Ketorolac improves central retinal thickness (CRT) or visual acuity (VA) after vitrectomy and epiretinal membrane (ERM) peel, and assess pre-operative OCT findings indicating patients who may benefit from this treatment.

Setting/Venue: Sussex Eye Hospital, Brighton, UK

Methods: Retrospective cohort study assessing all vitrectomies with ERM peel at the Sussex Eye Hospital from January 2019 to October 2021. Patients under one consultant received Ketorolac post operatively, while the remainder did not. 335 patients were identified, but excluded if concurrent procedure (excepting cryotherapy +/- gas tamponade), history of retinal surgery, diabetes, uveitis, retinal vein occlusion, or other macular pathology, or if time from pre-operative assessment to procedure exceeded 6 months, or follow up did not occur 6 to 26 weeks post operatively. Data was collected on 56 eligible patients including Ketorolac use and pre and post-operative VA and CRT.

Results: 28 of 56 patients received post-operative Ketorolac. Ketorolac patients trended towards worse pre-operative VA (mean 59.1 vs 64.2 EDTRS letters p=0.138) and CRT (502µm vs 466 µm=0.116). Ketorolac patients showed similar mean post-operative VA (69.1 vs 69.5 ETDRS

letters), and CRT (408µm vs 403µm). Change from baseline in Ketorolac patients appeared greater in VA (+10.1 vs +5.32 ETDRS letters p=0.190) and CRT (-93.6µm vs -65.1µm p=0.171). There was no statistically significant difference in outcomes in patients with pre-operative intra-retinal cysts or ellipsoid zone disruption. 3 Ketorolac patients required treatment for cystoid macular oedema (CMO) compared to 4 non-Ketorolac patients.

Conclusion: Post operative Ketorolac may improve outcomes in VA and CRT in patients after ERM peel, but the findings of the study have been limited by the small sample size and difference at baseline between the groups.

Financial Disclosure: No

Abstract Submission 2022 From: Catarina Cunha Ferreira

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Catarina Ferreira, Sofia Teixeira, Marisa Oliveira, Sandra Oliveira, Filipe Sousa-Neves, Paula Sepúlveda, Miguel Bilhoto

Abstract Title: Association between ectopic internal retinal layers and surgical outcomes in patients with idiopathic epiretinal membrane

Purpose: To investigate the functional impact of ectopic internal retinal layers (EIRL) and other optical coherence tomography parameters in patients with idiopathic epiretinal membrane (iERM) undergoing surgical treatment.

Setting/Venue: Department of Ophthalmology, Centro Hospitalar Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal.

Methods: A retrospective, cross-sectional study was performed including patients diagnosed with iERM who underwent pars plana vitrectomy (PPV) and epiretinal membrane peeling with or without combined cataract surgery, with a minimum follow-up of 12 months. Baseline and postoperative spectral domain optical coherence tomography (SD-OCT) scans were evaluated for iERM grade and different quantitative and qualitative parameters, including the presence and thickness of EIRL.
The association between preoperative and postoperative best-corrected visual acuity (BCVA) with the SD-OCT structural features was analyzed.

Results: Sixty-one eyes from 61 patients were included. BCVA improved significantly from baseline to follow-up visit in both combined (p<.01) and ppv-only (p="0.014)." groups. preoperative eirl presence thickness were associated with lower bcva in combined surgery r="0,496," p<0.01; respectively) patients p="0.043;" respectively). central macular (p<0.01), maximal retinal (p<0.01) decreased significantly postoperatively. fifty-four eyes (88.5%) presented after surgery, postoperative negatively affecting final (r="0.431," p<0.01). higher ierm stages worse no relationship was found between bcva. < />strong>

Conclusion: Preoperative EIRL presented no association with final BCVA. Presence of EIRL postoperatively was highly common in our sample, with postoperative EIRL thickness being a marker for poor visual outcome after iERM surgery. Preoperative stratification with an iERM staging system

was effective in predicting functional recovery.

Financial Disclosure: No

Abstract Submission 2022 From: Emma Linton

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): George Moussa Assad Jalil Tsveta Ivanova

Abstract Title: Optical Coherence Tomography Manual Measurements, are we doing it wrong? Calliper function between modern Spectral Domain Modalities

Purpose: The calliper function is used for manual measurements of full-thickness-macular-holes (FTMH). We aimed to investigate whether a reproducible difference could be detected beyond interobserver variability between two commonly used manufacturers in their manual calliper facility in spectral domain (SD) optical coherence tomography (OCT) for metrics related to FTMH.

Setting/Venue: All patients included in the study were treated at a single tertiary eye centre in the UK.

Methods: Two independent observers examined eight OCT scans and 128 measurements (minimal-linear-diameter [MLD], basal diameter [BD] and Hole Height on both sides) of FTMHs, taken on Heidelberg Spectralis and Topcon Triton (OCT machines). The interobserver agreement and OCT machine agreement of measurements were analysed by Bland-Altman plots and intraclass correlation coefficient (ICC) analysis. Spectralis and Triton had 125µm and 50µm horizontal b-scan spacing respectively.

Results: Overall, we report high absolute agreement in inter-observer (ICC 0.991[95%CI 0.985-0.995, p<.001]) and oct machine (icc 0.993[95%ci 0.987-0.996, p<0.001]) variability. lower horizontal resolution in triton compared to spectralis lead inter-observer variability, smaller measurements. scanning density relatively large variation if different reference scans were chosen, consistently mld measurements than triton. vertical without 1:1 scaling inaccurate exaggerated oblique calliper function appears otherwise identically calibrated. < />strong>

Conclusion: We report excellent inter-observer and OCT machine agreement in measurements. We advise higher density horizontal b-scans if possible, or the use of radial OCT scans, particularly for smaller FTMH. The use of 1:1 scaling for vertical measurements regardless of OCT machines will result in less exaggerated vertical measurements relative to true size.

Financial Disclosure: No

Abstract Submission 2022 From: Mahmut Dogramaci

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): none

Abstract Title: Comparative study of commonly intraocular forceps

Purpose: To establish the subtle differences between three commonly used intraocular forceps tip designs and compare their effectivity and safety margins

Setting/Venue: Princess Alexandra Hospital, Essex, Harlow, CM20 1QX

Methods: A purpose-built robotic system with a biomimetic membrane resembling retinal layers was used to model pinch peeling procedure. A 27 gauge Eckardt End-Gripping, 27 Gauge Katalyst Dex and a 27 Ultrapeel forceps were tested.

Results: Perforation through excessive denting occurred at 15.48 mg with Katalyst, 15.85 mg with Eckart and 16.01 mg with Ultra-peel forceps. Denting depth and tissue lifting power showed an initial positive followed by a plateau and finally a negative correlation. The maximum lifting weight for Eckart was 15.29mg, for Katalyst was 8.43 mg and for Ultra-peel was 11.13. The minimum dent to achieve the maximum lifting for Eckart was 1.10 mg, for Katalyst was 10.42 mg and for ultra-peel was 0.97mg. The safety range for Eckart was 14.75, for Katalyst was 5.06 mg and for ultra peel was 15.04.

Conclusion: Different forceps tip designs have significant influence on the forceps overall performance and safety

Financial Disclosure: Yes

Abstract Submission 2022 From: Haifan Huang

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – DIABETIC RETINOPATHY

Co Author(s): Haifan Huang, Nomdo M. Jansonius, Andries J. Smit, Leonoor I. Los

Abstract Title: Skin autofluorescence increase in patients with proliferative diabetic retinopathy requiring vitrectomy

Purpose: Skin autofluorescence (SAF) is an indicator of long term glucose memory. SAF is relatively stable in healthy subjects and increases slowly in diabetes patients with progression of diabetic retinopathy. We investigated how fast SAF increases in patients with severe proliferative diabetic retinopathy (PDR), requiring a vitrectomy.
Setting/Venue: Prospective cohort study

Methods: Patients diagnosed with PDR and treated with vitrectomy were included. SAF was measured with the AGE Reader (DiagnOptics B.V., Groningen, The Netherlands) at baseline (median 3 months after vitrectomy) and 6 months later. HbA1c levels were collected at baseline.

Results: Thirty-eight patients were included (mean age 54 ± 14 years; 16 (42%) female). Eighteen (47%) had type 1 diabetes; mean duration of diabetes was 25 ± 13 years.
Eighteen patients had diabetic nephropathy; 4 had had amputations. Median HbA1c was 71 mmol/mol (normal range: 22-42 mmol/mol). Median SAF was 2.7 Arbitrary Units (AU) at baseline and 3.1 AU after 6 months (paired t-test: P<.001). baseline saf correlated with age (spearman rho

0.53, p<0.001), but not hba1c. was different between patients or without diabetic nephropathy and a increase found in both groups. < />strong>

Conclusion: In our study, SAF increased strongly in 6 months (normal age-related increase typically 0.02 AU/year), which supports the role of poor glycemic control in the development of advanced PDR. SAF may be used to guide stricter diabetes treatment and more frequent ophthalmological follow-ups.

Financial Disclosure: Yes

Abstract Submission 2022 From: Andrew Davies

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – DIABETIC RETINOPATHY

Co Author(s): -

Abstract Title: Never the Twain Shall Meet

Purpose: To describe a disastrous outcome in a patient with diabetic tractional retinal detachment and post-operative massive epiretinal proliferation.

Setting/Venue: A busy but newly established VR service.

Methods: A 60 year old male with poorly controlled diabetes presented with untreated severe proliferative retinopathy. Presented with VA 6/12, but massive NVD and inferior TRD complex involving the edge of the macula. Vitrectomy was complicated by: a hyaloid that wouldn't detach; a mobile retina that wouldn't stay still; and excessive intra-operative haemorrhage that couldn't be controlled. Oil was put in. Two months later re-operation was attempted but now the retina had scrunched in to a total surgical nightmare with severe membranes that could not be peeled. It's now a non-salvageable eye with 3/36 VA and permanent oil fill.

Results: The combination of silicone oil, incomplete vitrectomy for TRD, and pre and sub-retinal haemorrhage led to the development of severe untreatable epiretinal proliferative membranes with a disastrous outcome. As a junior Consultant this was a complication I was not aware of before this case, with scanty mention in the literature. And yet informal discussions since it seems many senior colleagues were aware of this risk. I hope to spread the word for our fellows and garner some advice on what I could have done differently.

Conclusion: Beware of using silicone oil in severe diabetic eyes.

Financial Disclosure: No

Abstract Submission 2022 From: Matthew Maguire

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – DIABETIC RETINOPATHY

Co Author(s): Alisdair Laidlaw

AbstractTitle: Summary of early analysis from the Vitrectomy for Diabetic Macular Oedema (VIDEO) Trial

Purpose: To present the early results from The VIDEO trial: a feasibility randomised control trial of Vitrectomy + standard care vs standard care alone (treat and extend intravitreal Ranbizumab/Aflibercept) in the treatment of diabetic macular oedema (DMO)

Setting/Venue: Prospective multicentre randomised feasibility trial

Methods: DMO Patients were recruited to the trial with persistent macular oedema despite 3 loading injections of anti-VEGF. Persistent oedema was considered to be macular thickness >350µ in the central 1mm ETDRS subfield. Patients were then randomised 1:1 to receive either continued standard care (treat and extend intravitreal anti-VEGF injections) or Vitrectomy + standard care, with stratification for vitreomacular interface abnormality. Patients were followed up for 12 months. Baseline and final visit best corrected visual acuity (BCVA), macular thickness (CMT) and total injection number were analysed.

Results: Trial recruitment was severely affected by the COVID-19 pandemic. Despite this, 47 patients were recruited to the trial and 43 patients completed 12 months follow up (3 withdrawals and 1 death). The 2 groups displayed comparable demographics at baseline, including BCVA and CMT. At 12 months here was a median letter loss of -1 in the standard care group and -2 in the vitrectomy arm (-1 across the whole cohort). There was a median CMT reduction of 41µ in all patients, 78µ in the standard arm and 32µ in the vitrectomy arm. Mean injection number was 9 in both groups.

Conclusion: There did not appear to be an additional benefit from vitrectomy when combined with standard care treatment in patients who had failed to respond to 3 anti-VEGF loading injections. There is little evidence to support a larger RCT of the same question.

Financial Disclosure: No

Abstract Submission 2022 From: Boon Lin Teh

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Boon Lin Teh, Mohaimen Al-Zubaidy, Roxane J Hillier, David H Steel

Abstract Title: Outcome of North East England regional vitreoretinal weekend on-call service in managing acute rhegmatogenous retinal detachment (RRD)

Purpose: It is increasingly recognized that certain types of detachment are urgent and should have timely surgery to maximize outcomes. Progressive macula-sparing RRD is often regarded as more urgent and operated on within 24 hours, however macula-involving RRD has traditionally been

scheduled for surgery more routinely. We set up a regional vitreoretinal (VR) on call service to enable timely surgery and audited the outcomes for acute RRD with both macular sparing and involvement.

Setting/Venue: Sunderland Eye Infirmary and Newcastle Eye Centre

Methods: We retrospectively reviewed all patients with acute RRD that were operated over weekend between 1.1.2018 – 31.12.2019 as part of regional VR on-call. Eyes with recent vitrectomy were excluded. Baseline variables, visual and anatomical outcomes and complications were recorded. BEAVRS probability calculator was used to calculate predicted visual acuity outcome for the macular-involving cases based on their weekend date of surgery.

Results: 90 eyes were operated over weekend for acute RRD. 35 eyes (38.9%) were macula-involving RRD and 61 (67.8%) were phakic. Majority (97.8%) underwent vitrectomy, with one scleral buckle and one pneumatic retinopexy. In the macula-on RRD group, median presenting BCVA was 0.2 logMAR with median time to surgery within the same day. BCVA improved by -0.08 logMAR and 52 eyes (94.5%) achieved primary anatomical success. In the macula-off RRD group, median presenting BCVA was 0.92 logMAR. Two eyes had grade C PVR on presentation. Median time to surgery was one day. 31 eyes (88.6%) achieved primary anatomical success with BCVA improvement of -0.61 logMAR. Using the BEAVRS probability calculator, 74.4% of the macula involving eyes overall were predicted to achieve a post-operative BCVA of 0.3 logMAR or better based on their actual timing of surgery; this was significantly different to the 66.7% predicted if they had been operated upon on the following Monday (p<.001). in reality 24 of our 31 eyes with primary attachment (77.4%) achieved 0.3 logmar or better, reflecting the predicted weekend results closely (χ2="0.088," p="0.767)." < />strong>

Conclusion: Our regional weekend vitreoretinal on-call service was safe and effective, with favourable RRD surgical outcomes. The results suggest a higher probability of visual recovery due to earlier surgical intervention.

Financial Disclosure: No

Abstract Submission 2022 From: Theodor Stappler

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Andrea Montesel Thomas Wolfensberger Chiara Eandi

Abstract Title: Management of Rhegmatogenous Retinal Detachment with Coexisting Macular Hole

Purpose: Although not the primary cause of retinal detachment, the mere presence of an additional MH in the retina's most sensitive area represents a major complicating factor that heavily affects the patient's future visual prognosis and even the reoperation rate. Achieving MH closure is obviously critical to improving postoperative visual recovery.

Setting/Venue: Jules Gonin Eye Hospital, Lausanne, Switzerland

Methods: To the best of our knowledge, this study is the first to investigate the outcomes of the ILM-FLAP technique in MH-RETINAL DETACHMENT without pathological myopia. We present a single center, single surgeon, consecutive case series on all patients with MH-RRD from December 2017 to February 2021. Exclusion criteria were high myopia, posterior staphyloma, chorioretinal atrophy, and macular schisis. Comprehensive ophthalmologic examinations, including measurement of best-corrected visual acuity, slit-lamp ophthalmoscopy and high-resolution SD or swept-source OCT examination were performed on all patients. Main outcome measures were: Primary and final retinal reattachment rate MH closure rate Postoperative BCVA

Results: The primary retinal reattachment rate was 90% (10/11.) One patient developed a retinal re-detachment which was treated with PPV/silicone oil tamponade (oil removed).
FINAL retinal reattachment rate was 100%. Macular hole closure was achieved in all patients (11/11). OCT proved retinal remodelling and restoration of ellipsoid layer architecture over time with no evidence of scarring. Vision improved in all patients. The mean BCVA at the final postoperative visit was 0.4±0.37 logMAR (range -0.1 - 1.3). 7 of the 11 patients (63%) achieved a BCVA of at least 0.6 logMAR or better, the best visual acuity being -0.1 logMAR.

Conclusion: The ILM-FLAP technique achieved MH closure in ALL patients with documented restoration of regular macular architecture combined with final retinal reattachment in ALL patients. Such high visual acuities can only be attributed to the restoration of central macular function following successful MH repair and these cannot be obtained somehow “eccentrically.”

Financial Disclosure: No

Abstract Submission 2022 From: Julian Elias Klaas

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Jakob Siedlecki, Benedikt Schworm MD, Daniel Deussen MD, Nicolas Feltgen MD, David H Steel MD, D Alistair H Laidlaw MD, Siegfried Priglinger MD

Abstract Title: The Nomenclature and Assessment of Macula-Off Retinal Detachment Expert Survey (NAMES)

Purpose: To collect the expert opinion of international retina specialists with regard to the preoperative assessment and nomenclature of the foveal status in macula involving retinal detachment using optical coherence tomography (OCT), and to define possible areas of inter-agreements

Setting/Venue: International Expert Survey

Methods: A questionnaire of 38 questions was distributed to members of the British and Eire Association of Vitreoretinal Surgeons (BEAVRS), the European Society of Retina Specialists (EURETINA), the German Retina Society (DRG) and participants of the Vail Meeting 2022 via surveymonkey. Respondents were graded as experts if they had personally performed more than 300 surgeries for retinal detachment (RD) or if they had at least 5 publications in the field. An inter-

agreement between respondents of >60% was defined as consensus, agreement of >50% as near-consensus and <50% as no consensus.

Results: One-hundred and eleven experts completed the survey. 93 experts (83,8%) confirmed the regular use of OCT in RD involving the macular region, especially in clinically unclear cases (90.1 %). According to the questionnaire, 91.9 % used the term "macula-off" for a detached foveal status and 27.9 % also for a complete macular detachment. Consensus was reached with regard to the need for an OCT-based assessment of the preoperative macular status (63.1 %) and the presence of an epiretinal membrane (63.2%). Near-consensus was found for the preoperative assessment of the integrity of outer retinal layers (59%) and subfoveal height of detachment (54.7%).

Conclusion: Experts agree that the preoperative macular status of eyes with macula-off RD should be assessed by OCT, especially to distinguish fovea-involving from macula-involving RD. An OCT-based nomenclature – currently lacking in standardized care – could improve the management of patients with RD.

Financial Disclosure: No

Abstract Submission 2022 From: George Moussa (submitter) / irina Cristescu (Presenter)

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Tsveta Ivanova George Moussa Hadi Ziaei Kirti Jasani Mariantonia Ferrara Felipe Dhawahir-Scala Niall Patton Stephen Charles Assad Jalil

Abstract Title: Pseudophakic Rhegmatogenous retinal detachment, does 360-laser barricade improve outcomes?

Purpose: This study investigates the single surgery anatomical success (SSAS) rates, visual outcomes and the effect of 360 barricade laser in pseudophakic eyes that had vitrectomy during 2011-2020 for primary rhegmatogenous retinal detachment (RRD).

Setting/Venue: Manchester Royal Eye Hospital

Methods: Retrospective, continuous comparative study. Multivariable regression covariates for primary re-detachment include age, gender, onset-of-detachment, pre-op logMAR, ocular co-morbidities, macula-status, majority inferior (vs superior) RRD, number-of-tears and clock-hours of RRD, 360-laser, and perfluorocarbon use. For logMAR gain, primary-redetachment was added as a covariate.

Results: We included 467 eyes (370[79.2% eyes] no-360-laser and 96[21.8%] 360-laser) with mean follow-up time of 388(161) days. The SSAS was 444(95.1%) overall, and 351(94.9%) and 93(95.9%) in no-360-laser and 360-laser groups respectively (p=0.798). Compared to the no-360-laser group, the 360-laser group had significantly worse post-operative VA but logMAR gain was not different between groups (p=0.812). A multivariable binary logistic regression found that only perfluorocarbon use with increased primary re-detachment (OR:5.32[p=0.048]) and 360-laser did not contribute to increased SSAS. A multivariable linear regression analysis found low logMAR gain

was significantly associated with better pre-operative logMAR, ocular co-morbidities and a higher number of clock hours of detached RRD, and primary re-detachment.

Conclusion: Our study found no difference of SSAS, or functional outcomes following prophylactic 360-laser in pseudophakic eyes treated with PPV for primary RRD following multivariable risk adjustment.

Financial Disclosure: No

Abstract Submission 2022 From: Jennifer Hind

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Jennifer Hind, Alan Cox, Gerard McGowan, John Murdoch, Shohista Saidkasimova, David Yorston

Abstract Title: Comparison of observed outcomes of primary retinal detachment surgery with a predictive model for probability of success

Purpose: To validate a predictive model for successful vitrectomy in primary retinal detachment(RD) repair. This model classifies RD as high(>90%); medium(75-90%) or low(<75%) probability of successful reattachment. Features influencing success were age, location of lowest break/total inferior clock hours detached, total RD, proliferative vitreoretinopathy grade, cryotherapy use, tamponade and vitrectomy gauge.

Setting/Venue: This prospective study was carried out in a tertiary NHS Department of Vitreoretinal Surgery.

Methods: Data was collected prospectively on patients with primary rhegmatogenous RD treated with vitrectomy between 23/08/2021 and 20/04/2022. Demographics, laterality, lens status, and features of detachment were recorded. The primary outcome measure was successful reattachment at minimum 8 weeks. For eyes treated with primary oil, the primary outcome measure was successful retinal reattachment 8 weeks after oil removal. This was compared to the model described above, which provides a percentage probability of success. The observed rate of primary success was compared to the expected rate in a high(>90%); medium(75-90%) and low(<75%) probability group using Fishers exact test.

Results: 180/203(88%) patients had ≥ 8 weeks follow-up and are included in subsequent analysis. Primary reattachment was achieved in 82%(148/180). Median follow-up for primary success is 10 weeks (range 8-38). 86% of the high probability group (predicted >90% chance of success) achieved primary retinal reattachment (observed 124/144, expected 135/144, p = 0.05). Of the medium (75-90%) group, 78% were successful (observed 21/27, expected 18/27, p=0.5) and from the low probability (<75%), 33% (3/9) were successful. There was no statistically significant difference for the groups with high or medium probability of successful reattachment. The low probability group was too small for analysis.

Conclusion: Outcomes in this study support the model for predicting likelihood of successful reattachment, with no statistically significant difference in observed re-detachments compared with expectation. This could allow an individualised patient risk assessment based on

clinical features which may be useful for future clinical trials.

Financial Disclosure: No

Abstract Submission 2022 From: Jonathan Smith

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Haifa Madi Nikolaos Tzoumas David Steel

AbstractTitle: First year results from the British Ophthalmological Surveillance Unit (BOSU) study on Silicone Oil related Visual Loss.

Purpose: To present results and analysis of data collected before the COVID pandemic lockdown.

Setting/Venue: UK wide data collection between August 2018 and February 2019

Methods: All cases of silicone oil related visual loss (SORVL) collected via the yellow card BOSU system between August 2018 and February 2019. A case control group was also collected. The BOSU follow-up questionnaire required the submitting consultant to provide the following information: - Best corrected Visual Acuity (BCVA) pre-operatively, with silicone oil (SO) in-situ and post-operatively - Patient demographics - Macular status - Presence of giant retinal tear - Length of SO tamponade - Highest intraocular pressure

Results: 14 cases of confirmed SORVL visual loss with fully returned questionnaires were identified. 50 case controls. Analysis of the data to be presented includes: - Incidence calculation for SORVL in the UK during the collection period - Comparison of baseline characteristics between the case control and collection group - Uni and multivariate analysis of potential risk factors for SORVL A review of the SO brands used in the 14 cases will also be included (anonymised if required)

Conclusion: The first year of BOSU collection found 14 cases of SORVL. The brand and batch number have been identified in the majority and this will allow further detailed chemical analysis for any potential underlying causative compounds.

Financial Disclosure: Yes

Abstract Submission 2022 From: Miss Ruth Jones

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Dr Harpreet Kaur, Dr Mohamed Eldardeery, Mr Stephen Winder

Abstract Title: Success rates of argon laser retinopexy in a tertiary Vitreoretinal centre

Purpose: Previous studies have reported that around 24% of patients treated with argon laser for retinal tears require further treatment. This study evaluates our department's outcomes.

Setting/Venue: The Royal Hallamshire Hospital, Sheffield.

Methods: Retrospective analysis via electronic patient records over a two year period, Jan 2020 to Dec 2021, of all patients requiring slit lamp argon laser photocoagulation for the treatment of a retinal tear, in a tertiary Vitreoretinal (VR) centre.

Results: 263 lasers performed. 71 (27%) patients required further treatment (55 additional laser, 2 cryotherapy and 14 ultimately required vitrectomy surgery). The tears that required further treatment 59 (83%) were performed by speciality doctors or trainees (17% by VR consultant or fellow). Tears that did not require further treatment, 128 (67%) were performed by juniors (33% by VR consultant or fellow). Eyes that required further treatment 60 (85%) had single tears at presentation, 11 (15%) had multiple. Eyes that did not require further treatment 181 (91%) were single tears at presentation and 11 (6%) had multiple.

Conclusion: This study showed 27% of patients receiving laser retinopexy required further treatment. Less experienced users may be a contributing factor, which emphasises the need for more supervised, structured training. Also, number of tears at presentation may be a risk factor for requiring further intervention, helping to guide these patients' expectations.

Financial Disclosure: No

Abstract Submission 2022 From: Asterios Diafas

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Diafas A, Gray S, Heimann H, Pearce I, Tan SZ, Chua PY, Sandinha T, Dragoumis I, Groenewald C, Zheng Y, Hussain R.

Abstract Title: Macular Displacement and Metamorphopsia Following Primary Retinal Detachment Repair: Pars Plana Vitrectomy vs Scleral Buckling

Purpose: To investigate and compare the macular displacement and the metamorphopsia in patients with primary rhegmatogenous retinal detachment treated with pars plana vitrectomy (PPV) or scleral buckling (SB).

Setting/Venue: St Paul's Eye Unit, Royal Liverpool University Hospital, Liverpool.

Methods: This is a prospective non-randomised interventional study. A total of 108 patients with primary rhegmatogenous retinal detachment who underwent successful retinal reattachment surgery were studied over a period of 6 months postoperatively. The vessel printing on the fundus autofluorescence photos and the M-chart were used to evaluate the macular displacement and the metamorphopsia, respectively. We also assessed the stereopsis, the postoperative visual acuity and the vision-related quality of life using the VFQ-25 questionnaire.

Results: Our study included 63 (58.3%) males and 45 (41.7%) females. The mean age was 55.6 years with a range of 22 to 82 years. The primary reattachment rate was 78.1% (50/64) in the SB group and 91.8% (68/74) in the PPV group (p<.05). the study is still ongoing and data are being analysed. < />strong>

Conclusion: The PPV is associated with higher primary reattachment rate compared to SB. The metamorphopsia and retinal displacement findings will be available and presentable by the BEAVRS meeting in November 2022.

Financial Disclosure: No

Abstract Submission 2022 From: Tim Patterson

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – UVEITIS/MASQUERADE SYNDROMES/SYMPATHETIC OPHTHALMIA

Co Author(s): Adam Kedzierski, Jonathan Ritson, Chris McLean, Rupesh Agrawal, Richard J. Blanch

AbstractTitle: A systematic review of the risk of sympathetic ophthalmia associated with open globe injury management strategies.

Purpose: Sympathetic ophthalmia (SO) is an intraocular autoimmune response triggered by open globe injury (OGI). After OGI primary eye removal, versus primary repair, as a SO risk modulation strategy remains controversial. This review was conducted to report the incidence of SO following primary repair versus primary enucleation or primary evisceration.

Setting/Venue: Patients who had sustained OGI injury and had primary surgical intervention.

Methods: A meta-analysis was carried out in accordance with PRISMA guidelines. Five journal databases were searched. Pooled rates for each surgical group were calculated with a random effects model using R (v3.6.1). This review was registered with PROSPERO: CRD42021262616.

Results: Seven studies with 7566 OGIs were included, 6806 underwent primary repair and 760 primary eye removal. When patients undergone primary repair a risk of sympathetic ophthalmia was demonstrated as 0.16% (95% CI 0.00% to 0.37%), compared to a rate of 0.03% (95% CI 0.00% to 0.15%) in patients who underwent primary eye removal. The absolute risk reduction after primary repair versus primary eye removal was 0.11% (95% CI -0.19% to 0.40%). A number needed to treat of at least 250 was calculated for the number of patients to be treated with primary eye removal to prevent a case of SO.

Conclusion: The authors acknowledge that observational studies have limited ability to define causal relationships. To further increase the reliability of future evaluations of SO risk, population level, observational studies should be carried out which include ocular trauma score data.

Financial Disclosure: No

Abstract Submission 2022 From: Ariel Yuhan Ong

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – UVEITIS/MASQUERADE SYNDROMES/SYMPATHETIC OPHTHALMIA

Co Author(s): Ankur Mehta Boon Lin Teh Vy Hoang David Steele Peter Charbel Issa Jonathan Smith

Abstract Title: Microbiological sampling has limited value in managing acute postoperative endophthalmitis: a multicentre study

Purpose: To determine whether intraocular fluid sampling results impact clinical management in acute postoperative endophthalmitis.

Setting/Venue: Multicentre retrospective cohort study from three tertiary centres in England.

Methods: Patients presenting with acute postoperative endophthalmitis from January 2016 to July 2022 were identified from hospital records. Data on visual acuity (VA) at various timepoints, cause of endophthalmitis, microbiological results, initial and subsequent treatments, and complications were collated.

Results: Ninety-six eyes of 95 patients were included. Sampling was predominantly obtained via vitreous tap alone (n=49, 52%), vitreous and anterior chamber tap (n=28, 29%), and pars plana vitrectomy (n=8, 9%) at presentation. Half were culture-positive (n=48, 50%), and all were sensitive to the empirical intravitreal antibiotics administered at presentation. Thirty-three eyes (36%) had a change in management, defined as further intravitreal antibiotic therapy or surgical intervention within 4 weeks of the initial treatment. Reasons included lack of clinical improvement (n=25) and deterioration (n=8). None of these changes were prompted by culture or sensitivity results. Positive microbiological cultures were associated with worse final VA on univariate analysis (p=0.018). This continued to hold true in a multivariate regression model which included other potential explanatory variables (odds ratio 3.49, 95%CI 1.05-11.66).

Conclusion: Microbiological sampling was of limited clinical utility in this series – any changes in management were based on clinical findings rather than microbiological results, and all cases with positive culture results demonstrated in vitro sensitivity to the empirical intravitreal antibiotics administered. Microbiological yield could serve as a predictor of poorer visual outcome.

Financial Disclosure: No

Abstract Submission 2022 From: Joel Lee Zher Jong

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – UVEITIS/MASQUERADE SYNDROMES/SYMPATHETIC OPHTHALMIA

Co Author(s): Lona Jawaheer, Kurt Spiteri-Cornish, Anand Chawla

Abstract Title: Surgical Outcomes of Pars Plana Vitrectomy for Intraocular Complications Related to Vasoproliferative Tumours of the Retina

Purpose: To investigate the safety and efficacy of pars plana vitrectomy (PPV) in

managing intraocular complications relating to vasoproliferative tumours of the retina (VPL).

Setting/Venue: Retrospective case note review of all VPL patients who underwent vitrectomy at Sheffield Teaching Hospital NHS Trust from 2005 to 2020.

Methods: Retrospective case note analysis in which patient demographics, clinical characteristics (tumour position, subretinal fluid and intraocular complications), intraoperative data and surgical outcomes (visual outcome, post-operative complications and additional operations) were collected and evaluated. In total 17 patients were identified. Indications for PPV included epiretinal membrane (ERM, n=7), vitreous haemorrhage (VH, n=3), retinal detachment (RD, n=3), diagnostic (n=1), other (multiple ocular pathology) (n=3).

Results: The mean age was 52 years (range, 14 – 82). After PPV, 58.8% have improved vision, 23.5% remained unchanged, and 17.6% deteriorated. Subgroup analysis revealed that patients undergoing surgery for ERM had good outcomes with 85.7% noticing improvement or stabilisation of symptoms, mean logMAR visual acuity improved from 0.719±0.267 pre-operatively to 0.476±0.271 post-operatively. Patients undergoing surgery for VH also had good outcomes with resolution (and no recurrence) of the haemorrhage in 67% and 100% with one or more surgeries respectively. Outcomes for retinal detachment surgery were logMAR 2.126±0.301 pre-operatively and 1.185±0.522 post-operatively, with one recurred retinal detachment. In the ERM group, 3 patients had adjunctive treatment for the VPL at the time of surgery and 4 patients had no adjunctive treatment. There was no difference between the two groups in terms of outcome or complications.

Conclusion: This is one of the largest datasets in looking at the outcomes of vitrectomy for complications of VPL. Our data shows that PPV is effective and safe in managing VPL-related intraocular complications with good outcomes and a low rate of complications for patients with ERM and VH. Furthermore, for patients with ERM there is no difference in outcomes whether any adjunctive treatment was given or not.

Financial Disclosure: No

Abstract Submission 2022 From: Hamza Abdou

Session Choice: Rapid Fire Session 3’ surgical videos / 3’ case reports/case series – UVEITIS/MASQUERADE SYNDROMES/SYMPATHETIC OPHTHALMIA

Co Author(s): Bharat Kapoor

Abstract Title: When the mystery is only solved by a post-mortem autopsy

Purpose: To study an interesting case of unusual presentation of intraocular lymphoma

Setting/Venue: Tertiary University Hospital in the UK

Methods: A 53 year old patient presented with reduced vision. A clinical picture suggestive of bilateral Vogt Koyanagi Harada (VKH) syndrome was found and oral steroids were started. In few days, the patient was admitted to the hospital with a stroke and treated with thrombolysis. He was discharged after clinical improvement. Eye review showed improvement in the interim, and possible

choroidal masses were found later. Lymphoma was suggested as a possibility. The patient has developed other strokes with progressive neurological symptoms. He had extensive investigations which were inconclusive. Sadly, the patient has passed away and post mortem autopsy confirmed B-cell lymphoma.

Results: The patient had unusual presentation of intraocular lymphoma resembling VKH with no medical history at presentation. However, developing new medical symptoms and signs not correlating raised questions about VKH diagnosis. The challenge of performing vitreous biopsy in an unstable patient added to the complexity. Also, having had a recent dose of COVID vaccine was a red herring to investigate for vaccine -related thrombosis. Revisiting the diagnosis of VKH soon when associated with unexpected medical symptoms, was an important learning point from this case.

Conclusion: In summary, intraocular lymphoma can be very challenging to diagnose, and multidisciplinary team input is highly needed. Although rare, clinicians should always consider intraocular lymphoma when facing unusual presentation and course of relevant posterior uveitis .

Financial Disclosure: No

Abstract Submission 2022 From: Miranda Buckle

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): A Hoskins, G Schmidt-Mellado, K Pillay, C Hartley, C K Patel, R Slater.

Abstract Title: Multimodal characterisation of the infant response to retinopathy of prematurity screening and treatment

Purpose: Retinopathy of prematurity (ROP) screening and treatment are considered painful and stressful for infants. Pain-stress during the preterm period can lead to negative consequences for infant development. We present multimodal methods of infant pain-stress assessment, including quantitative analysis of heart rate variability (HRV) and continuous electroencephalography (EEG) recordings.

Setting/Venue: John Radcliffe Neonatal Intensive Care Unit

Methods: 44 infants (median 34.9 weeks corrected gestational age (CGA)) were studied during binocular indirect ophthalmoscopy screening. 5 infants (median 37.9 weeks CGA) underwent diode laser photocoagulation. Infants undergoing laser treatment received pre-medication with oral morphine, paracetamol, and chloral hydrate. The following data were recorded for each infant: oxygen saturations, HR, facial expression video, clinical pain score, and EEG. Signal analysis was performed using R and Matlab.

Results: Median screening pain score was 9, indicating moderate pain. There was a trend toward lower PIPP-R score in infants undergoing treatment ($p=0.074$). HR increased significantly during and after screening ($p=0.007$). HR change was significantly lower following laser treatment than screening ($p=0.031$). HRV analysis identified that screening evoked a significant reduction in parasympathetic nervous system (PNS) activity ($p<.05$). quantitative analysis of continuous eeg identified that screening evoked a significant, noxious-specific, increase in

high frequency brain activity (p<0.05). pre-medication before laser treatment significant temporal reduction complexity compared to non-medicated infants < />strong>

Conclusion: This research demonstrates methods of pain-stress assessment in infants undergoing clinical procedures. Cardiac reactivity analysis identified that screening evokes a stress response in infants. EEG analysis identified higher frequency brain activity following screening, which may be nociceptive-specific. Analgesic and sedative medications reduce EEG complexity, which may reflect modulated nociceptive processing.

Financial Disclosure: No

Abstract Submission 2022 From: Obaid Kousha

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): Blazej Staniszewski Chole Shipton Jennifer Hind Sonali Tarafdar John Ellis Andrew Blaikie

Abstract Title: Validity of a low-cost simulation eye for retinal laser training and assessment

Purpose: Simulation allows training and assessment of hazardous procedures in a safe and controlled environment. There is a lack of low-cost but high fidelity retinal laser simulation tools. The aim of this study is to assess the validity of a low-cost retinal laser simulation eye as a teaching and assessment tool

Setting/Venue: All four regions of Scotland involved in ophthalmology specialty training participated

Methods: 40 participants (16 consultants and 24 trainees) competent at performing retinal laser were recruited. They were asked to perform an area of 'laser retinopexy' and 'pan-retinal photocoagulation (PRP)' using a slit-lamp laser and/or laser indirect ophthalmoscope (LIO). The laser type and settings were recorded where possible. After performing the laser, the participants were asked to rate fidelity of the retinal laser simulation eye and its utility as a training and assessment tool using a 7-point Likert scale. They were also asked for free text feedback.

Results: Median fidelity of the simulation eye compared to lasering a real eye was 6 out of 7 with a range of 5-7. The median usefulness of the simulation eye as training and assessment tool was 7 out of 7 with a range of 5-7. Retinopexy laser parameter used were; mean power=590mW, pulse duration=30ms and spot size=200um diameter. PRP laser parameter used were; mean power=555mW, pulse duration=20ms and spot size=200um diameter. 34 double-frequency Nd-YAG (532nm) laser and 6 diode (577nm) laser was used. The main free text feedback focused on improving the slit-lamp mount to improve realism such as eye movement.

Conclusion: This frugal retinal laser simulation eye was perceived to be highly realistic, safe and suitable to train and assess retinal laser competency amongst trainees. This high fidelity yet affordable simulation tool can be adopted in high- and low-resource settings to improve access to and quality of sight saving laser treatment.

Financial Disclosure: No

Abstract Submission 2022 From: Venughanan Manikavasagar

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): Samy El-Omda, Teresa Snook, Jeffry Hogg, David Steel

Abstract Title: Comparing Vitreoretinal-related research output in the UK with other subspecialties

Purpose: Conference abstract to publication rates (APR) assess research trends in various specialties. APRs in ophthalmic studies range from 27% to 38% [1-3], however few studies delineate outputs by ophthalmic subspecialty. Existing studies fail further to isolate vitreoretinal outputs. This study analyses UK Vitreoretinal research trends compared to other ophthalmic subspecialties.

Setting/Venue: Royal Victoria Infirmary, Newcastle

Methods: The Royal College of Ophthalmologists' (RCOphth) Annual Congress was selected as the flagship, umbrella conference to allow for subspecialty comparison. 1505 abstracts presented from 2013-2019 were characterised by subspecialty, presentation type and year of presentation. PubMed and Google Scholar were used to identify any peer-review publications related to each title. Descriptive and correlation statistics were produced using SPSS.

Results: A median of 13 vitreoretinal abstracts (Interquartile range 7-15) were accepted to each congress over the 7 years studied with a median of 218 total abstracts (IQR 208-221) across all sub-specialties. This median 5.8% of vitreoretinal abstract composition did not trend significantly over time (Spearman's r = 0.071, p= 0 .88), nor did the median 26.7% (IQR 10.0% - 44.4%) of vitreoretinal abstracts being published within 36 months (Spearman's r = -0.036, p= 0 .94). The 27.1% of vitreoretinal abstracts was comparable to the 27.1% across all non-vitreoretinal abstracts and the median impact factor of the publishing journal was 3.6 (IQR 2.8 - 4.2) versus 3.7 (IQR 1.9 - 4.1). Six vitreoretinal abstracts (7.2%) were presented orally, 4 (66.7%) of which were published, whilst 77 were poster presentations, 19 (24.7%) of which were published. The 23 publications were made across 16 different academic journals, only two of which had an explicit retinal scope.

Conclusion: Quality of UK vitreoretinal research, as described by APR and IF of publishing journals, appears stable [1]. It is also representative of UK ophthalmic research which appears stable. There is increased APR among oral abstracts. There appear no clear target journals for UK vitreoretinal researchers to better their publication chances.

Financial Disclosure: No

Abstract Submission 2022 From: Brian O Tuama

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): Christine Goodchild, Kirk A. J. Stephenson, Paul Connell

Abstract Title: Nd:YAG Posterior Hyaloidotomy – a nonsurgical intervention for subhyaloid haemorrhage

Purpose: Subhyaloid premacular haemorrhage (SPH) often presents with sudden, painless loss of vision. It is commonly associated with valsalva manoeuvre, Purtscher's retinopathy, acute intracranial bleeding or secondary to retinal vascular disease. Nd:YAG hyaloidotomy (NYH) is a quick, non-invasive treatment option with the potential for rapid improvement in visual acuity (VA).

Setting/Venue: Patient care was carried out in the Eye Emergency Department and Ophthalmic Outpatient Department of the Mater Misericordiae Hospital, Dublin.

Methods: This report presents two cases of SPH presenting to the Eye Emergency Department with acute vision loss. Both patients underwent NYH two days later with follow-up at weeks 1 and 4. Patient 1 (P1), a 37-year-old lady with active systemic Sarcoidosis and intellectual disability presented with hand movements VA in her right eye. Patient 2 (P2) presented with 3/36 VA in his left eye following a significant valsalva. P1 was a poor surgical candidate and P2 required rapid improvement in vision due to work commitments. Both patients were treated using the central window of the Goldmann three-mirror lens. Three shots at 3.5mJ were applied in the inferotemporal aspect of the lesion in both cases, to avoid foveal damage.

Results: Both procedures achieved successful drainage of SPH into the vitreous cavity where it is more readily absorbed. Fundus photographs and optical coherence tomography images depicted complete resolution of SPH at week one of follow-up. P1 achieved 6/9 VA at week one and improved to 6/6 at one month. P2 had a VA of 6/6 at week one. There were no acute complications and vision remained stable at six months follow-up.

Conclusion: Nd:YAG hyaloidotomy remains an option for definitive treatment of SPH, particularly in poor surgical candidates and those requiring rapid return to employment.

Financial Disclosure: No

Abstract Submission 2022 From: Dr. Moulindu Paul

Session Choice: Free Papers: Retinal tears-predisposing retinal lesions/RRD/Myopia/Macular Hole/ERM : 5 minutes presentations

Co Author(s): Vijay Hegde; Mohammed Rafe Hussain

Abstract Title: Assessing the Patient Satisfaction of Virtual Surgical Retina Clinics during COVID-19 Pandemic

Purpose: This study aims to assess patient satisfaction in the virtual retina clinic for surgical retinal diseases during the COVID-19 pandemic.

Setting/Venue: Aberdeen Royal Infirmary Ophthalmology Service

Methods: A retrospective database study was conducted for surgical retina patients, who underwent pre-operative and post-operative assessment and observation with surgical retinal

diseases in Aberdeen Royal Infirmary Ophthalmology Service during the pandemic from July 2020-April 2021. We have also included stable surgical retina patients. All patients were either contacted via phone or post with a 'patient questionnaire'. The patient satisfaction survey was conducted by analysing the database with blind assessment.

Results: One hundred forty eyeballs from 140 patients, a mix of new and review patients, were included. In our survey >90 % of the patients were satisfied (highly satisfied or satisfied) with the new type of virtual clinic care provided.

Conclusion: The virtual surgical retina clinics are safe and efficient method to review patients with surgical retina diseases with a high
level of patient satisfaction. The virtual clinics has the potential to be widespread answer to increased pressure for specialist ophthalmology input in an ageing population.

Financial Disclosure: No

Abstract Submission 2022 From: Hadi Ziaei

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): Ryan Ramtour, Amy-Lee Shirodkar, Felipe Dhawahir-Scala, Ian De Silva

Abstract Title: Age and Gender Based Variations of Vitreoretinal Presentations to Hospital Emergency Eye Care Services

Purpose: The majority of existing literature on this is based on single centre
data, and gender variations for all three diagnoses (PVD, RT and RD) have not been studied simultaneously. We aim to identify the true burden of these diagnoses on the
NHS, and analyse age and gender variations.

Setting/Venue: 13 NHS hospital centres across England - 7 NHS Trusts

Methods: Data was extracted from the English Emergency Eye care study which was a multicentre, retrospective, cross sectional, observational study of Hospital Emergency Eye Care Services (HEECS) attendances during a 28-day period in January 2020. We extracted data for all new
attendances of PVD, RT and RD within seven NHS trusts. From 12,067 eye attendances,
a total of 1084 cases were identified to have VR conditions: PVD (78%), Retinal Tears
(11%) and Retinal Detachment (11%). Subgroup analyses were conducted for those attendees
<50 and ≥50 years of age. Chi-squared test was used to assess the difference in
proportions of males:females.

Results: PVD and RD were most common between 60-69, and tears between 50-59. 36% of all RDs presented over the weekend. This was due to a higher rate of male attendance (32 out of 69 cases) compared with females (3 out of 28 cases). Across all ages, men presented less commonly with PVD, at similar rates for tears and twice as frequently with RDs. Gender effects were statistically significant. There were higher rates of weekend attendance for tears in both males
(66.7%) and females (150%). For RDs, there was a 116% increase in weekend presentations in males, and a 70% reduction in females.

Conclusion: RD is more common in males, with 40% more cases presenting to HEECS compared to females over a 4-week period across the UK. This disparity is marked over weekends, where 91% of RD attendances were male. The data suggests that there may be an inherently elevated risk of RD in males.

Financial Disclosure: No

Abstract Submission 2022 From: Aadil Hussain

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): Jared Ching Shohista Saidkasimova

Abstract Title: A case of recurrent viral retinitis treated with intravitreal antiviral agents in a silicone oil filled eye

Purpose: To report a case of recurrent acute retinal necrosis (ARN) and it's management in an eye filled with silicone oil previously complicated by rhegmatogenous retinal detachment (RRD).

Setting/Venue: A Tertiary Centre University Hospital in the East of England

Methods: A case report of a 68-year-old gentlemen with successfully treated herpes simplex virus type 1 (HSV1) ARN complicated by RRD requiring pars plana vitrectomy with silicone oil tamponade, presented with a relapse of ARN with silicone oil in situ. Treatment was initiated with a combination of oral systemic and intravitreal antiviral agents.

Results: Systemic treatment was initiated with oral Valaciclovir. Concurrent intravitreal Ganciclovir and later Foscarnet was also administered into the silicone oil filled eye. Silicone oil is an important tool in vitreoretinal surgery with properties that facilitate intraocular tamponade. However, the hydrophobic nature of silicone oil has been queried to impact the efficacy of intravitreal therapy due to drug delivery, absorption, dosage, and retinal toxicity. Disease remission was achieved with retinitis remaining clinically quiescent after stopping the intravitreal injections. Aqueous humour PCR remained negative for 3 years.

Conclusion: RRD is a significant complication of ARN which may require surgery with silicone oil tamponade. Recurrence of ARN can be effectively treated with intravitreal Ganciclovir and Foscarnet injections in a silicone oil filled eye with concurrent oral antiviral therapy. Aqueous humour sampling proved useful in the monitoring of disease activity.

Financial Disclosure: No

Abstract Submission 2022 From: Ahmed Javed

Session Choice: Rapid Fire Session 3' surgical videos / 3' case reports/case series – MISCELLANEOUS

Co Author(s): George Panos, Mary Awad, Gavin Orr, Dharmalingam Kumudhan, Anwar Zaman and Craig Wilde.

Abstract Title: Indications and outcomes of Encircling Scleral Buckle (ESB) removal in previously vitrectomised eyes.

Purpose: Previous studies on re-detachment following removal of scleral buckles have often excluded patients with vitrectomised eyes. We aim to report the risk of retinal re-detachment following removal of a broad 360 degree encircling scleral buckle (ESB) in eyes repaired by combined pars plana vitrectomy (PPV).

Setting/Venue: Tertiary referral centre.

Methods: A 7 year (2013-2020) retrospective study of all consecutive patients who underwent removal of 276 style ESB at a tertiary centre. Case identification included searching on a list-by-list basis, to identify a cohort who had undergone buckle removal. Operation notes were reviewed to extract case details. Once identified, all available patient records within our hospital were reviewed. Including clinical entries, scanned copies of hand-written notes (Digital Health Records) and digital entries (Medisoft) were reviewed. Data extract was undertaken on an Excel spreadsheet.

Results: A total of 40 patients were identified that had 276 type ESB removed. The mean age was 59.8 years (SD=21.4). Reasons for buckle removal were, exposure 27/40 (68%), diplopia 8/40 (20%), extrusion in 1/40 (2.5%) and not documented in 4/40 (10%) Three (3) of 40 patients (7.5%) detached following buckle removal.

Conclusion: Risk of retinal re-detachment following removal of ESB buckle in previously vitrectomised eyes remains high (7.5%). This should be appropriately emphasised during consent and the potential for further surgery reported. Strategies aimed at risk reduction, such as prophylactic 360-degree barrier laser should be explored in future studies.

Financial Disclosure: No

Abstract Submission 2022 From: Amanda Ie

Session Choice: Rapid Fire Session 3’ surgical videos / 3’ case reports/case series – MISCELLANEOUS

Co Author(s): Mandeep Sagoo, Robert MacLaren, Jasmina Kapetanovic

Abstract Title: Retinal vasoproliferative tumours have varied clinical course requiring tailored management

Purpose: Retinal vasoproliferative tumours are rare, benign vascular tumours associated with exudation. There is currently no consensus on management. Herein, we describe a varied clinical course and management of three patients with vasoproliferative tumours.

Setting/Venue: Oxford Eye Hospital, Oxford University Hospitals NHS Foundation Trust, UK

Methods: Retrospective case series. Data collected include clinical history, examination, retinal imaging and details of interventions. Literature review is included.

Results: Case 1 is a 76-year-old female with a vitreous haemorrhage and epiretinal membrane (ERM) and was found to have a presumed longstanding solitary vasoproliferative tumour. She previously declined treatment with plaque radiotherapy. She underwent routine ERM surgery and was noted to have a quiescent VPT intraoperatively, which remained stable 1-month post-op. Case 2 is 24-year-old female presenting with an inferonasal retinal VPT on a known background of retinitis pigmentosa (RP) of unknown genetic mutation. Examination demonstrated unilateral longstanding cystoid macular oedema (CMO) in the left eye associated with two inferonasal peripheral retinal yellow-red lesions and localised exudation. She underwent initial intravitreal steroid (Ozurdex) for CMO and cryotherapy. 1-month post-op revealed good response to treatment with reduction of CMO and flat VPT lesions without exudate. 6 months post-operatively, lesions remained stable though there was evidence of progressive CMO. The decision was made for observation due to concurrent pregnancy. Review at 9 months post-op showed stable CMO and quiescent VPT lesions. Case 3 is a 28-year-old female who presented with a right eye inferotemporal VPT lesion on a background of childhood-onset RP (CRB1 mutation) with Coat's-type phenotype. VA was 6/30 OD with longstanding NPL vision OS from previous extensive serous detachment and subsequent anterior segment ischaemia / pupillary block glaucoma. Examination revealed right localised inferior serous detachment associated with an inferior vascular complex, vitreous cells, and CMO. Left eye showed chronic annular tractional retinal detachment. She was initially offered anti-VEGF injections and oral acetazolamide. Barrier retinopexy was performed to inferior RD. Due to increasing submacular fluid, external plaque radiotherapy was offered. This stabilised the fundal appearance, but concomitant post-radiation retinopathy and inflammation ensued. Subtenon triamcinolone was administered. Review at 6 months showed reduced inflammation/CMO and continues close observation for her inflammatory/fibrovascular membranes which will likely require incipient removal.

Conclusion: Vasoproliferative tumours are rare and there is currently no consensus on management. The cases presented reiterate the need for a tailored management paradigm according to patient factors. Secondary VPTs tend to occur bilaterally and more severe presentations may occur when associated with inherited retinal dystrophies. In our series, CRB1 variant led to a particularly prolonged and complicated clinical course requiring active and aggressive management.

Financial Disclosure: No