MALAYSIAN SOCIETY OF OPHTHALMOLOGY

ABSTRACTS OF FREE PAPER AND POSTER PRESENTATIONS

16 – 18 March 2018
Hatten Hotel Melaka, Hatten Square
Melaka, Malaysia

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CONTENTS

FREE PAPER

FP1. Postoperative Endophthalmitis - A Malaysian Perspective

Authors : Wai Yong Zheng, Fiona Chew Lee Min, Mohamad Aziz Salowi, Goh Pik Pin
Institution : Hospital Tuanku Jaafar Seremban

Objective: To investigate the incidence and risk factors of developing postoperative endophthalmitis (POE) in Malaysia context. The data is extracted from Malaysia National Eye Database - Cataract Surgery Registry (CSR) for a 7-year duration.

Method: Retrospective cross-sectional study, which was conducted by analysing data collected from web-based CSR. All cataract surgery patients from 1/6/2008 to 31/12/2014 were included. The exclusion criteria are traumatic cataract or previous ocular surgery. Whereas the variables included are for instance demographic data, ocular co-morbidities, intra-operative details and post-operative visual acuity (VA) at final ophthalmological follow-up. Variables between subjects whom developed POE were compared to those without POE by univariant and multivariant logistic regression.

Result: A Total of 163503 patients were included. The yearly incidence of POE showed reducing trend from 0.11%(18/16,790) in year 2008 to 0.06%(19/29,840) in year 2014. The Risk factors for POE were male gender(OR: 2.57, CI:1.479,3.043), renal disease(OR:2.012, CI:1.123,6.237), secondary causes of cataract (OR:4.214, CI:2.345,9.345), uveitis(OR:14.223, CI:3.657,36.576) and diabetic retinopathy(OR:2.123, CI:1.345,3.456). Intra-operative factors which predisposed POE were longer surgical time(OR:3.715, CI:1.325,6.692), anaesthesia besides topical or intracamera(OR:2.129, CI:1.292,4.442), anterior chamber intraocular lens (ACIOL) (OR:5.317, CI:2.5,10.711) and non-foldable IOL(CI:3.662, CI:1.654,4.125). Intraoperative complication such as posterior capsule rupture(OR:5.624, CI:1.467,8.920) and vitreous loss(OR:4.67, CI:1.69-9.347) increase the risk of POE. Only 15.27%(20/131) of the patients achieved post-operative visual acuity of 6/12 or better within POE group.

Conclusion: Despite the introduction of intracameral antibiotics, postoperative endophthalmitis remains a challenge in cataract surgery. Further research should be carried out on the identified modifiable risk factors and management of POE.

3rd Prize

FP2. From Virtual To Reality: Examining The Use Of A Virtual Reality Simulator In A Cataract Surgical Training Programme

Authors : Kiew Sieh Yean (Mbchb, Mmed (Ophth)),
Daniel Shu-Wei Ting (Mbbs, Mmed (Ophth), Fams, Phd),
Ian Yeo (Mbbs, Mmed(Ophth), Frcs(Ed), Frcs(G), Fams),
Charumathi Sabanayagam (Md, Phd)
Institution : Singapore National Eye Centre

Objective: The EyeSi simulator is a virtual reality training platform with a cataract training suite. The "ICO-Ophthalmology Surgical Competency Assessment Rubric: phacoemulsification"(ICO-OSCAR:phaco) is an internationally validated assessment tool to assess trainee phacoemulsification surgeons.

This study aimed to assess correlation between EyeSi simulator-scored performance and ICO-OSCAR:phaco assessment, and to examine whether EyeSi training improved surgical performance, as assessed by ICO-OSCAR:phaco scores, surgical time and complication rate.

Method: 9 novice cataract surgeons were recruited. All subjects completed a series of 14 modules, followed by a proficiency-based test on the EyeSi simulator. For each trainee, 5 surgeries before and 5 surgeries after simulator training were video-recorded, anonymized and presented to a panel of 4 masked, blinded assessors who graded the surgeries according to the ICO-OSCAR:phaco assessment rubric. Surgical times were extracted from each video, and intraoperative complications extracted from operating theatre complication reporting forms.

Result: EyeSi proficiency test scores were not significantly correlated to ICO-OSCAR:phaco scores at baseline (Pearson's correlation coefficient, r=-0.319, p=0.441) or post-simulator training(r=0.572, p=0.108). Despite this, all surgeons showed significant improvement in operating room performance post-simulator training, with mean improvement in surgical time of 14.5%(p=0.003) and 66.7% improvement in ICO-OSCAR:phaco scores(p=0.002) compared to baseline. There was no significant difference in complication rate pre-and post-simulator training(p=0.67).

Conclusion: The EyeSi simulator scoring does not correlate well with ICO-OSCAR:phaco scores; further refinement to the computer-based scoring is required before this can be used as an assessment tool in cataract surgical training. Nevertheless, the EyeSi may be a useful learning tool, with improvements seen in surgical performance post-simulator training.

FP3. Barriers to Cataract Surgery at the Primary Healthcare Level in the Eastern Zone of Peninsular Malaysia

Authors : Nurulain Mat Zin (MSc), Ahmad Shahir (MSc), Asma Hassan (PhD), Abdul Mutalib (MS)
Institution : Faculty of Medicine, Universiti Sultan Zainal Abidin

Objective: The Second Malaysia National Eye Survey in 2014 revealed cataract as the main cause of blindness with a distressing majority believes they did not require surgery. We need to understand the barriers to cataract surgery at the primary healthcare level from the perspective of patients who has allowed themselves to become severely blind due to cataract.

Method: We studied 11 participants in the Eastern zone utilising the interpretative phenomenological analysis of a qualitative approach more renowned in health psychology research. An in-depth interviews were performed at their homes were recorded and transcribed verbatim. The use of NVivo software version 8.0 facilitated the analysis process.

Result: The first main barrier identified was nondisclosure of their visual problems due to belated needs for better sight, delayed awareness of their visual status and social stigma. The second main barrier was concerning the patient-provider-related issues due to miscommunication and delayed referral. The first issue has led to their delayed awareness and belief for not requiring cataract surgery which delayed the disclosure of their visual problems to primary healthcare providers. The patient-provider-related issues further delayed their cataract detection and referral process necessary for an immediate cataract surgery.

Conclusion: Thus, addressing these barriers at primary healthcare level can improve our strategies for earlier cataract detection, and to motivate and assist them for the timely surgical intervention. This could prevent severe cataract blindness and the other related complications in the community.

FP4. Outcome of Intrastromal Refractive Lenticule Extraction (RELEX) Preoperative Assessment and Factors that Lead to Deferment of Treatment

Authors : Ahmad Nurfahmi Bin Akhtar Ali, Khairidzan Mohamad Kamal
Institution : International Islamic University Malaysia

Objective: To evaluate the outcome of Intrastromal Refractive Lenticular Extraction (RELEX) Procedure: Small Incision Lenticular Extraction (SMILE) preoperative assessment and preoperative diagnostic findings.

Method: A cross-sectional study conducted at IIUM Medical Centre, Kuantan, Pahang, Malaysia in the period of 6 months from August 2017 to February 2018.Comprehensive laser refractive surgery preoperative assessment was performed. Patients' data were then evaluated by the technical committee and decisions on eligibility for SMILE procedure were made. Those who were not eligible for the SMILE are classified as either: Keratoconus (KCN), Subclinical KCN and non-KCN related disease.

Result: A total of 361 subjects were recruited during the study. 16.14% (51) of the patients were not eligible to undergo SMILE procedure. Among those patients, the majority were diagnosed as subclinical KCN (49.0%), followed by non-KCN related disease (35.3%) and newly diagnosed KCN (15.7%). 27.50% of subjects had pachymetry less than 470 m and 21.60% had steep keratometry more than 47.3 diopters. Total of 25.5% of patients had both low pachymetry and high keratometry. 15.7% was detected to have at least one ocular pathology. 9.80% of the patients were noted to have inadequate postoperative residual stromal thickness.

Conclusion: Though Intrastromal Refractive Lenticular Extraction procedure is coined to be a safer procedure, the ocular safety parameters of standard LASIK procedure is still needed to be observed. It is important to detect subclinical KCN patients during the screening as they are the prevalent group presented during preoperative assessment.

FP5. Study on Waste Production From Phacoemulsification Surgeries in Miri Hospital

Authors : Khor Hui Gim, Irene Cho (MD), Chieng Lee Ling (MD, M.MED Ophthal)
Institution : Department of Ophthalmology, Miri Hospital, Sarawak, Malaysia

Objective: The study was designed to determine the amount of waste produced from phacoemulsification surgeries in Miri Hospital and ways to curtail with the problems.

Method: A prospective study regarding the waste produced by phacoemulsification surgeries was conducted for 6 months duration, from July till December 2017. Sessions with only phacoemulsification surgery cases were included in this study. Operative sessions consisting of non-phacoemulsification surgeries were excluded. The waste was subdivided into general waste, clinical waste and sharps. The waste produced by surgeons and trainees were counted separately. Mean weight of the waste per case was obtained by dividing the total weight of waste produced with total number of cases.

Result: The mean waste production for one phacoemulsification surgery for experience surgeon was 0.959kg per case (n=193), while for trainees, was 1.136kg per case (n=10).

Conclusion: The average waste produced per case of phacoemulsification surgery in Miri Hospital was 0.967kg. We would like to explore the possibility of 3R (Reduce, Reuse, Recycle)'s principle in handling of the waste produced in favour of reducing the greenhouse effect.

FP6. Post-Operative Visual Outcome of Traumatic Cataract Cases in Penang General Hospital: A 6 Year Retrospective Review

Authors : Adeline Low Shan Lyn, Chow Rhuen Chiou (MS Ophthalmology UM), Ang Ee Ling (MS Ophthalmology UM)
Institution : Penang General Hospital

Objective: To review the epidemiology and visual outcome of patients with surgically managed traumatic cataract at the Ophthalmology Department, Penang General Hospital.

Method: A retrospective analysis was conducted on 42 eyes that underwent cataract surgery for traumatic cataract over a 6-year period (1-January-2012 to 31-December-2017). Data obtained from case notes and the National Eye Database included age, gender, mechanism of injury, type of surgery, presenting and post-operative best corrected visual acuity (BCVA). Cases were classified according to the Birmingham Eye Trauma Terminology System (BETTS) into open and closed globe injuries. The Ocular Trauma Score (OTS) was calculated for each case.

Result: In our cohort, there was a male predominance with a male:female ratio of 6:1. Mean age was 46.2±14.8 years, and 85.7% were Malaysians. Closed globe injury was the main cause of traumatic cataracts (76.2%) compared to open globe insult (23.8%). 33 eyes were legally blind on presentation (BCVA<3/60), and 36 eyes had an OTS of 3 or worse. More than half the cases were managed with phacoemulsification (54.8%), followed by lens aspiration (19.0%), extra-capsular cataract extraction (14.3%), and intra-capsular cataract extraction (11.9%). 83.3% underwent primary intraocular lens implantation. Post-operatively, BCVA^{3}6/12 was achieved in 65.6% of eyes sustaining closed globe trauma vs. 20.0% in open globe injuries. Mean line gain was statistically different between both groups, which was 5.47±3.78 and 2.60±3.37 respectively (p=0.038).

Conclusion: Properly managed traumatic cataracts can lead to good visual outcome. Visual gain is significantly better in closed globe injuries, highlighting the destructive nature of open globe trauma.

FP7. Usage of Multifocal Intraocular Lens (IOL) in Pusat Pembedahan Katarak Majlis Agam Islam Wilayah Persekutuan (MAIWP) - Hospital Selayang (PPKM-HS)

Authors : Ng Chong Kiat, Rozila Ariff
Institution : Hospital Selayang

Objective: To find out visual outcomes post cataract surgery with Multifocal IOL implantation in PPKM-HS.

Method: Observational retrospective case study.

Data selection was taken from Eye Clinic Management System (ECMS), duration of surgery January till October 2017. Inclusion criteria patient with no ocular co-morbid, no intra-operative complication, were operated by a single ophthalmic surgeon using phacoemulsification and post-operative refraction at 6 weeks.

Pre-operative and post-operative evaluation included biometry, refraction and spectacle dependency. The data collected was analyzed using SPSS version 20.

Result: The average age that presented to PPKM-HS for multifocal IOL were 58 years old (SD=13.95). Out of 49 eyes, 57% were male, 55% were Malays, 51% came with severe visual impairment (> 6/60) and 61% were operated on the right eye. The most frequent type of multifocal IOL were 55% multifocal toric. There were significant improvement of visual outcome $t(49)=12.109$ $p<0.001$ and achieve target spherical equivalence $t(49)=6.909$ $p<0.001$. 89.8% obtained spectacle independency. A Kruskal-Wallis Test was performed and there were no correlation with the type of multifocal lens used with visual outcome for distance $X(49,3)=0.15$, intermediate $X(49,3)=0.317$ and near $X(49,3)=0.408$

Conclusion: There is a significantly good visual outcome in PPKM-HS using multifocal IOL100% ($p<0.001$).

FP8. Cornea Astigmatism in Patients Who Refuse Toric Intraocular Lens (IOL) Implantation to Correct Corneal Astigmatism at the Time of Cataract Surgery in Pusat Pembedahan Katarak Majlis Agama Islam Wilayah Persekutuan (MAIWP) Hospital Selayang (PPKM-HS)

Authors : Lim Zhi Yiu Hiang Weang, Duratul Ain Hussin, Rozila Ariff
Institution : Pusat Pembedahan Katarak MAIWP - Hospital Selayang

Objective: To evaluate post-operative cornea astigmatism in patients who refused Toric Intraocular lens (IOL) implantation for corneal cylinder>1.5D.

Method: Cataract patients who refuse Toric Intraocular lens implantation with corneal astigmatism >1.5D in 17 eyes were included. Patients aged between 37 and 80 years with cataract, pre-existing regular corneal astigmatism of equal or more than 1.5D up to 3.4.D and willing to follow up for 6 weeks. They were operated by a multiple ophthalmic surgeons using phacoemulsification. Irregular astigmatism, corneal infection and opacities and any previous ocular surgery were excluded from the study. Pre-operative and post-operative corneal astigmatism data were compared and analysed using SPSS version 20.

Result: 13 of 17 eyes (76%) the cyclindrical power was reduced. Pre-op cyclindrical power has higher reading (Mean= -2.25, SD=0.55) compare to post-operative corneal astigmatism (Mean= -2.04, SD=0.64). Mean reduction of corneal astigmatism post-operative is 0.20. Paired sample t-tests indicated that there were significant difference in pre corneal astigmatism and post corneal astigmatism reduction ($t(17) = 2.313$, $p =0.034$)

Conclusion: In patients who were unable to purchase toric IOL, they can also achieve reduction of corneal astigmatism by having the main wound made at the steepest meridian.

FP9. Use of Head Borne Video Technology in Low Vision Rehabilitation

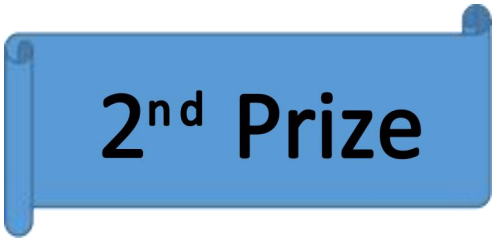
Authors : Mr. Rob G. Hilkes
Institution : eSight Corporation

Objective: Researchers in Low Vision Rehabilitation have long maintained the most desirable assistive technology for the visually impaired should be a wearable, hands free system as intuitive as eyeglasses, that provide video enhancement for all working distances. Usable implementations were previously impossible because of limitations in the requisite technologies (miniature displays, compact high-zoom cameras, aspherical non-uniform optics, power efficient portable computing, etc.) resulted in designs that were impractically bulky and uncomfortable. Recently several new devices have entered the market attempting to realize these requirements with varying degrees of success. This paper will consider the various design requirements of a wearable video based low vision aid, and compare these attributes for several recently launched products.

Method: 1) A six-site, independent clinical evaluation (n=51) of "eSight Eyewear". 2) Laboratory technical comparisons of key attributes of various devices, considering image quality, display field of view, orgonomic factors. 3) Demographic information for the current eSight user population (n~1750), including such attributes as disease diagnosis, age factors, corrected acuity, and visual field. This is by far the largest single cohort of users of this new type of adaptive technology for the visually impaired.

Result: Significant improvements in all visual function measures compared with habitual corrective lenses. Most significantly, Quality of Life measures using the VA Low Vision Visual Function Questionnaire (VA LV VFQ-48) show significant improvement after three months of device use.

Conclusion: A well designed head borne video system can provide significant benefit to well-indicated visually impaired patients.



FP10. Factors Affecting Pupil Reactivity After Cycloplegia In Asian Children

Authors : Jane Lim, Swati Handa, Audrey Chia, Seyed Ehsan Saffari
Institution : Singapore National Eye Centre

Objective: Eyedrop administration in children can be very stressful, and may hence lack in effectiveness. We aim to assess factors which influence the failure of cycloplegia, as measured by pupil reactivity, in Asian children.

Method: A prospective study was conducted on 268 children aged 2-12 years who underwent cycloplegic refraction. Refraction was performed by optometrists 30 minutes after instillation of proparacaine 0.5% eyedrops, one drop each of 2.5% phenylephrine and 0.5% tropicamide eye drops and two or three cycles of 1% cyclopentolate eyedrops 5

minutes apart. Optometrists recorded the size and reactivity of pupils. Nurses instilling the eye drops and optometrist recorded the child's level of cooperation. Multivariate logistic regression identified the factors affecting effectiveness of cycloplegia (i.e. absence of pupil reactivity) including age, gender, number of cycles of cyclopentolate and child's co-operation as independent variables.

Result: The pupils in 36 children (13.4%) were still reactive at the time of cycloplegic refraction. Those children were noted to have smaller post-cycloplegia pupil sizes (6.3 ± 1.2 mm vs 7.4 ± 0.8mm, $p<0.001$) and were more likely to be uncooperative during administration of drops (19.4% vs 7.3%, $p=0.027$). On multivariate analysis, uncooperative children were 3.39 times more likely to have reactive pupils ($p=0.024$), while age ($p=0.892$), gender ($p=0.409$) and the number of cycles of eyedrops instilled were not relevant ($p=0.522$).

Conclusion: Pupil reactivity after cycloplegia was more likely to be determined by level of cooperativeness with instillation of eye drops, rather than age, gender or number of cycles of eyedrops used.

FP11. Viscoelastic: An Etiology of Toxic Anterior Segment Syndrome Post Cataract Surgery?

Authors : Nur Hafizah Binti Maffar, S. Premala Devi, Pushpha Raman, Khairul Husnaini Mohd Khalid
Institution : Hospital Tuanku Ampuan Najihah

Objective: To present case series of toxic anterior segment syndrome (TASS) in uneventful cataract surgeries.

Method: Thirteen eyes of 13 patients who developed TASS in 6 consecutive weeks were included in this study and investigations were carried out to identify the etiology. Detailed anterior segment, fundus examinations and B-scan were performed. Several factors were evaluated including preoperative risk factors, duration of surgery, surgeon, complications, type of phacoemulsification machine used, operating theatre temperature and humidity, processing such as sterilization technique of surgical instruments, irrigating solutions, drugs, viscoelastic substance (VES) and intraocular lens.

Result: All patients presented within 24 to 48 hours after surgery. Patients had corneal edema and severe anterior segment inflammation. A diagnosis of TASS was made and patients were treated with intensive topical steroids and all patients responded well. Twelve patients had good final visual outcome at 1 to 2 months after treatment except one patient who had underlying glaucoma. Suspected cause for TASS was VES. No new cases occurred after replacement of the VES.

Conclusion: TASS can cause serious damage to intraocular tissues resulting in visual loss. Early identification and elimination of causative agent can prevent the outbreak of TASS.

FP12. Vision and Refractive Outcome of Cataract Surgery with Multifocal IOL Implatation Using Two Biometry Techniques in Hospital Tengku Ampuan Rahimah (HTAR)

Authors : Banu Balakrishnan, Indra Nadras, Fazilawati
Institution : Hospital Tengku Ampuan Rahimah

Objective: To audit the visual and refractive outcome of cataract surgery with multifocal IOL implantation performed in HTAR from January 2017 to October 2017 using optical biometry (IOL Master) and immersion technique.

Method: A retrospective audit of 118 eyes of 92 patients who underwent uncomplicated surgery with multifocal IOL implantation. Eighty-six eyes had optical biometry and 32 eyes had immersion ultrasound biometry to determine the IOL dioptric power. Post-operative vision and refractive outcome of these two group of patients were compared.

Result: About 91.8% of patient in IOL Master group had post-op unaided vision 6/12 and better compared with 68.8% patient in immersion. For near unaided vision, about 84.7% of patient in IOL Master group had vision of N6 and better compared with 75.0% of patient when using immersion technique. There was statistically significant difference in mean spherical equivalent (SE) achieved in IOL Master (-0.2087±0.637)and immersion group(0.781±0.536). However , there was no significant different in mean absolute error (MAE) achieved in each group.

The percentage of eyes within ± 0.5D from target SE in IOL Master is 64%and 81.3% in immersion group.No significant difference was noted for both groups (p=0.079)

The percentage of eyes within ±0.75D of target SE was 81.4%in IOL Master group and 87.5% with immersion. No significant differences was seen (p=0.584).

Conclusion: Highly accurate biometry and strict patient selection is needed to maximise the refractive outcome of multifocal IOL implantation.

POSTER

1. When Less is More: The Role of Brinzolamide/Brimonidine as Fixed-Combination

Authors : Wilson Wong Jun Jie, Paveena Bhavani, Lim Hsien Han
Institution : Tun Hussein Onn National Eye Hospital

Objective: Fixed-combination medications is an alternative in treating primary open angle glaucoma (POAG). Advantages of these of medications include better adherence, reduced wash-out effect as well as exposure to preservatives and cost savings. Studies have also shown fixed-combination agents to reduce IOP more effectively than their component medications when used separately as monotherapy. Simbrinza was chosen as it is the only fixed-combination containing carbonic anhydrase inhibitors and alpha-2-agonist.

Method: This was a retrospective review of 43 eyes with POAG which were on maximum medical therapy. They were randomized to Simbrinza in combination with Ganfort® or Duotrav®. The two groups of patients were further subdivided into patients that had previous ocular surgery or selective laser trabeculoplasty (SLT). The primary goal was to assess if conversion to fixed-combination could further reduce the intraocular pressure in patients who are on maximum individual topical anti-glaucoma medications.

Result: The study enrolled 43 eyes with POAG. Mean IOP reduction was 2.98 mmHg across all groups. The group with no prior surgery or SLT showed higher IOP reduction of 2.64 mmHg compared to 2mmHg in eyes with prior surgery or SLT. Overall, IOP reduction was 3.69 mmHg in the Simbrinza® and Duotrav® group while there was a mean increase of 0.82mmHg when in combination with Ganfort®.

Conclusion: There is a role of switching from individual monotherapy to fixed-combination therapy in patients with POAG. Therefore, conversion to fixed-combination therapy should be considered as an option prior to surgery in patients with suboptimal IOP despite on maximum individual therapy.

2. Olanzapine-Induced Cataract in a Schizophrenic Patient

Authors : Lim Chang Zhen, Evelyn Tai, Khairy Shamel
Institution : Hospital Universiti Sains Malaysia

Objective: To report a case of cataract secondary to anti-psychotic medication.

Method: A case report To report a case of cataract secondary to anti-psychotic medication.

Result: A 19-year-old girl with underlying schizophrenia on olanzapine for the past two years complained of gradual blurring of vision in both eyes for 4 months prior to presentation. Prior to this, she had no ocular complaints. On examination, the right eye vision was counting finger, left eye 1/60. The anterior segment was normal except for bilateral diffuse cortical cataract precluding fundus examination. B-scans of the posterior segment were normal. Systemic examination was unremarkable. Blood investigations revealed a high random blood sugar. She was referred to the medical team, who treated her with oral hypoglycemic medication with the diagnosis of maturity onset diabetes of the youngBilateral

lens aspiration was subsequently performed. Post-operatively, best-corrected vision was 6/6 bilaterally. There was no evidence of diabetic retinopathy.

Conclusion: Patients on anti-psychotic medication are at higher risk of developing cataract and diabetes mellitus compared to the general population. Before initiation of such medication, thorough counseling of the potential side effects of anti-psychotic therapy is recommended. Patients on anti-psychotics who develop ocular complaints should receive an early ophthalmological evaluation.

3. Predictors of Visual and Anatomical Outcome Following Complete and Early Vitrectomy for Endophthalmitis

Authors : Christina Ng Wei Khee, Aida Zairani Mohd Zahidin, Zabri Kamarudin
Institution : Hospital Selayang

Objective: To determine the risk factors of poor visual and anatomical outcome in patients with endophthalmitis following complete and early vitrectomy.

Method: A prospective study of 61 consecutive patients with endophthalmitis undergoing vitrectomy between April 2016 and August 2017 in Hospital Selayang. Main outcome measure was visual acuity at 3 months post surgery. Anatomical outcome was secondary outcome measures. Poor vision was defined as visual acuity worse than 3/60. Poor anatomical outcome was retinal detachment at 3 months after vitrectomy.

Result: Total patients for traumatic endophthalmitis, post-operative endophthalmitis and endogenous endophthalmitis were 18 (29.5%), 21 (34.4%) and 22 (36.1%) respectively. The mean age of all patients was 54.3 (standard deviation (SD) ± 15.8, range 18 – 81) years. Majority was male (39 eyes, 63.9%) and Malay race (31 eyes, 50.8%). The mean logMAR value at presentation and 3 months post vitrectomy were 2.15 (± 0.56, equivalent to counting finger) and 1.63 (± 1.02, equivalent to 6/300). Twelve eyes (19.7%) gained visual acuity of 6/18 or better. Anatomical success was achieved in 47 eyes (77.0%). Predictors for poor visual outcome include increased intraocular pressure (IOP) at presentation (p=0.021), post-operative endophthalmitis following non-phacoemulsification (p=0.035), and vitreous abscess (p=0.014). Risk factors associated with poor anatomical outcome are presenting visual acuity of worse than hand movement (p=0.024), increased IOP at presentation (p=0.006), and vitreous abscess (p=0.002).

Conclusion: Increased IOP and vitreous abscess represent intense inflammation associated with poor visual and anatomical outcome. Presence of these inflammatory markers should alert the surgeons that these patients warrant more aggressive treatment.

4. Atypical Appearance of Diabetic Retinopathy - An Association with Rapid Progression of Kidney Disease

Authors : Aina Malindri Dasrilsyah, Umi Kalthum Md Nor,
Mae-Lynn Catherina Bastion, Ruslinda Mustafar
Institution : Pusat Perubatan UKM

Objective: To report a case of rapid progression of diabetic nephropathy and its association with severity of retinopathy.

Method: Case report.

Result: A 33-year-old gentleman was referred for ocular assessment. He has underlying diabetes mellitus for 7 years associated with hypertension and history of heavy cigarette smoking. Patient was admitted under Nephrology team for investigations of rapid deterioration to renal failure within 8 months He denied any ocular symptoms. At presentation, visual acuity was 6/9 ,N6 over both eye normal intraocular pressures (IOP) and anterior segment examination. Interestingly, there were minimal retinal haemorrhages, but faint new vessel at the disc was noted. The retinal hue was pale in appearance, and macula was dry. Fluorescein angiography study confirmed leaking new vessels and extensive retinal non-perfusion area signifying ischaemia. Renal biopsy, revealed segmented glomerulonephritis, but inflammatory markers were normal. He received serial retinal lasers. His best corrected vision remained 6/9, N6 in both eyes.

Conclusion: Rapid deterioration of nephropathy in diabetic and hypertensive patients should alert ophthalmologist of possible atypical proliferative diabetic retinopathy. Fluorescein angiography is mandatory to confirm neovascularisation and retinal ischaemia. Smoking history may be associated with worsening mincroangipathy.

5. Narrow Escape Cases of Ocular Trauma

Authors : Puspadevi Armugham, Poh Fong She, Rohana Abdul Rashid
Institution : Hospital Sultan Ismail Johor

Objective: To report narrow escape cases of Ocular fish hook injury and transorbital penetrating injury with retained knife.

Method: Case report.

Result: Ocular penetrating injury can result in serious vision loss or loss of the eye. We report cases of a ocular fish hook injury involving the eyelid which was removed with the “advance and cut” method and a transorbital penetrating injury with retained knife.

Case 1:47 years old fisherman presented with a fishhook piercing at lateral canthus with the barb inside the upper eyelid with no exit point seen. There was no associated ocular injury. The tip of the Fishhook could be palpated externally. Fishhook was removed with the “advance and cut” method. Visual acuity on presentation and postoperative was 6/9 in both the eyes.
Case 2: 32 years old man presented to us after being stabbed in his right eye by knife. A 16cm long knife was stabbed vertically into the medial canthus region about 4 mm away from medial angle of the right eye. On presentation, his right eye vision was

6/18.Postoperative right eye examination with normal anterior segment with commotion retinae at posterior pole. At one month his vision improved to 6/6 with resolved commotion retinae.

Conclusion: Retained injuries, type and position of objects are factors to be considered in selecting the proper method for removal. Immobilization until removal and infection control are important to avoid further insults to the eye. Imaging can assist in assessment of position and related injuries and allow for better surgical approach planning.

6. Early Spontaneous Displacement of Acute Submacular Blood

Authors : Izwan B. Kamal, Mushawiahti Mustapha,
Prof Mae Lynn Catherine Bastion
Institution : Hospital Canselor Tuanku Muhriz, Kuala Lumpur, Malaysia

Objective: To describe the occurrence of a case with subretinal haemorrhage that changed position within 24 hours.

Method: Retrospective Case report.

Result: A 62-year-old lady presented to the eye clinic complaining of right sided blurring of vision for 2 weeks duration. It was described as painless, affecting the central visual field more, and not associated with floaters or flashes of light. Visual acuity was counting fingers in the right eye. Anterior segment examination was normal with no relative afferent pupillary defect. Fundus examination revealed a subretinal haemorrhage over the macula extending to the superior and inferior arcades. Drusen were absent. The optic disc was pink with a normal cup to disc ratio. An Optical Coherence Tomography scan confirmed the haemorrhage to be subretinal. She was asked to return the next day in preparation for pneumatic displacement of subretinal blood and advised to be propped up at home. Vision on return then improved to 6/24. Fundus examination showed a smaller submacular haemorrhage which was away from the foveal area. A pigment epithelial detachment was identified superior to the macula. Fundus fluorescein angiography showed a pulsatile hyperfluorescent spot near the macula with branching vascular network. A diagnosis of submacular bleed secondary to polypoidal choroidal vasculopathy (PCV) was made, and the patient was treated with intravitreal aflibercept.

Conclusion: Submacular hemorrhages secondary to PCV can affect the vision severely and while the natural progression is variable, the severity can be improved upon simply by proper and adequate positioning of the patient.

7. B-Cell Lymphoma Resulting in Blindness

Authors : Izwan B. Kamal, Mushawiahti Mustapha,
Prof Mae Lynn Catherine Bastion
Institution : Hospital Canselor Tuanku Muhriz, Kuala Lumpur, Malaysia

Objective: To describe a case of diffuse large B-cell lymphoma that resulted in blindness

Method: Retrospective Case report.

Result: A 58 year old man with underlying diabetes and ischaemic heart disease presented with a frontal lobe swelling for the past 5 months associated with progressive painless visual loss in the left eye for the same duration. Symptoms rapidly accelerated for the past 1 month, accompanied by blocked nose and epistaxis. A nasal scope investigation revealed a mass in the left nasal cavity. An MRI of the brain, orbit and paranasal sinuses revealed a large mass arising from the left ethmoid sinus extending laterally into the left orbit with destruction of the medial aspect of the orbital roof and floor. The tumour mass effect caused compression of the left optic nerve. Excision biopsy was performed and microscopic examination showed tissues infiltrated by malignant lymphoid cells, immunohistologically found positive for CD20, CD10 and BCL-6. A diagnosis of diffuse large B-cell lymphoma was reached, and the patient is currently undergoing chemotherapy.

Conclusion: Diffuse large B-cell lymphoma is a malignant condition which can result in ocular blindness when it arises near the orbit as the tumour extends and compresses its surrounding tissue.

8. Eye Catches the Bloody Killer First

Authors : Anita Maniam, Goh Siew Yuen, Prakash Supahiah
Institution : Hospital Segamat

Objective: To report a case of leukemic retinopathy at which fundus examination was the first step to the diagnosis of chronic myeloid leukaemia.

Method: A case report.

Result: A 18 years old Chinese gentleman, with no known medical illness, presented with sudden onset of painless left eye blurring of vision one week prior. Visual acuities recorded right eye 6/6 and left eye 6/60. Anterior segment assessment showed no abnormality. Bilaterally, cup to disc ratio of was 0.3.There were retinal haemorrhages on the perifoveal area approaching the posterior pole of the right eye. Left eye portrayed similar hemorrhagic fundal presentation as found in the right eye with additional submacular bleed about one quarter size of fovea. Upon further questioning patient denied any constitutional or vasculitis symptoms. Systemic examination noted liver palpable about one fingerbreadth. His vital signs and random blood sugar were normal. Patient was subjected for haematological and infectious disease workouts. His white blood cells count was high 134.6 × 109/L. Peripheral blood smear revealed mainly hyperleucocytosis and blasts suggestive of chronic myeloid leukaemia. The patient was referred to a haematologist in another centre for further assessment. The patient was immediately put on oral hydroxyurea 1g BD and oral allopurinol 300 mg OD for 2 weeks.

Conclusion: In summary, fundal examination acts as a window to the systemic disease. It is evident that the knowledge of ocular involvement in leukaemia is imperative since the eye is the sole site where the leukemic infiltration can be observed directly. Clinicians should suspect leukaemia in an otherwise healthy individual with haemorrhagic retinopathy as high index of suspicion and good clinical acumen is crucial in saving patient's life.

9. Case Report: A Complicated Cataract Surgery in Pseudoexofoliation Syndrome

Authors : Nor Diyana Zainal Noor, Wan Haslina Wan Abdul Halim
Institution : University Kebangsaan Malaysia Medical Centre (UKMMC)

Objective: To report a case of a complicated cataract surgery in pseudoexfoliation syndrome.

Method: A case report.

Result: A 66 years old Malay gentleman with underlying diabetes mellitus presented with sudden onset of left eye painless blurring of vision for 6 days duration with no history of trauma. His best corrected visual acuity (BCVA) was 6/12 OD and 6/18 OS. Examination of the left eye revealed a quiet shallow anterior chamber (AC) with closed angle of grade 0 in all quadrants except for superior quadrant with IOP of 22 mmHg. There were pseudoexfoliative materials at the pupillary margin on both eyes. The left lens was subluxated with nuclear cataract. Fundus was unremarkable. Left anterior segment OCT showed an anteriorly tilted lens with thickness of 4.90mm and AC depth of 1.49mm. He was started on gutt timolol 0.5% BD and laser peripheral iridotomy (PI) was done. He underwent Extracapsular Cataract Extraction (ECCE) which was converted to Intracapsular Cataract Extraction (ICCE) with anterior chamber intraocular lens (ACIOL) implantation as intra-operatively the entire lens capsule was delivered during nucleus delivery due to 360 degree zonulysis. One month post operatively, his BCVA was 6/12 OS with IOP of 10 mmHg.

Conclusion: Cataract surgery in pseudoexfoliation syndrome are challenging and carries significant risk of complications. Thus, careful preoperative planning and intraoperative care are essential to ensure successful and safe surgery.

10. Unilateral Mooren's Ulcer with Progressive Corneal Melt

Authors : Nor Diyana Zainal Noor, Wan Haslina Wan Abdul Halim,
Aida Zairani Mohd Zahidin, Umi Kalthum Md Noh
Institution : University Kebangsaan Malaysia Medical Centre (UKMMC)

Objective: To report a case of progressive corneal melt in Mooren's ulcer.

Method: A case report.

Result: A-44-year-old Malay gentleman presented with history of left eye progressive visual loss in the left eye associated with pain and redness over a year. He developed the symptoms six months following pterygium excision and was unsure of mitomycin C usage. He was previously treated with corneal glue and short course of systemic steroid but defaulted follow up afterwards. Left eye visual acuity at presentation was hand motion, and

there was crescent- shaped peripheral corneal melt involving 270 degrees circumferentially. The cornea was hazy but there was no hypopyon or anterior segment reaction. All relevant investigations was negative but inflammatory markers were elevated. A diagnosis of Mooren's ulcer was made. Intravenous methylprednisolone was instituted, followed by oral steroid and azathioprine. However, he had poor response to treatment and showed evidence of progressive cornea melting. He underwent conjunctival resection followed by tectonic lamellar sclero-cornea keratoplasty after a month. Four months post-operatively, his BCVA ranged from 1/60 to counting finger and showed stable disease activity.

Conclusion: Mooren's ulcer is a rare, progressive and potentially sight-threatening condition of unknown etiology. The management is typically challenging and should be executed in a systematic approach.

11. pANCA Vasculitis with Bilateral Optic Perineuritis

Authors : Ivan Cheng En Yoo, Yong MH, Mushawiahti M, Jemaima CH
Institution : PPUKM

Objective: To report a case of bilateral optic perineuritis(OPN) secondary to pANCA vasculitis. We describe the presentation, clinical findings, classical features seen radiographically and treatment in this case.

Method: A case report with literature review.

Result: A 69 year old chinese woman with underlying pANCA vasculitis without previous history of ocular involvement experienced sudden onset both eyes blurring of vision associated with pain for one week. Ophthalmological evaluation demonstrated severe visual loss in both eye with pale optic discs, without other remarkable ocular signs of vasculitis. Magnetic resonance imaging of the brain and orbit was performed and revealed bilateral enhancement of the optic nerve sheath with classical tram track and doughnut signs. Intravenous methylprednisolone was given for 5 days and marked improvement of vision was seen.

Conclusion: In patients with pANCA vasculitis, bilateral optic perineuritis despite uncommon, can be one of the treatable causes to be considered with good response to prompt steroid treatment.

12. Traumatic Uveascleral Split

Authors : Ivan Cheng En Yoo, Mushawiahti M, Jemaima CH
Institution : PPUKM

Objective: To report a case of extensive cyclodialysis cleft due to blunt trauma, its signs, modalities to diagnose and outcome following surgical treatment.

Method: A case report.

Result: A 66 year old chinese gentleman had a shuttlecock injury over the right eye while playing badminton. Ocular examination demonstrated the visual acuity in the right eye was counting finger. Reverse relative afferent pupillary defect was negative. Slit lamp

examination revealed right normal lids, small conjunctival laceration with injection, clear cornea with iris pigments on endothelium, pupil is mid dilated 5-6mm, AC cells 4+ with vitreous touching endothelium, small blood clots on iris, and aphakic. Applanation tonometry revealed pressures of 03mmHg. Gonioscopic examination demonstrated cyclodialysis at 1-5 o'clock. Dilated fundoscopic examination showed dislocated phakic lens inferiorly and vitreous haemorrhage. Anterior segment optical coherence tomography and ultrasound biomicroscopy confirmed almost 360º cyclodialysis cleft sparing 10-11 o'clock. CT orbit showed no obvious globe rupture. A week later, right eye anterior vitrectomy, cyclodialysis cleft suturing and cryotherapy under general anaesthesia was performed. Postoperatively, intraocular pressure(IOP) picked up to 18mmHg.

Conclusion: Cyclodialysis cleft must be suspected in low IOP following blunt trauma. Prompt diagnosis with surgery can yield good results.

13. A Review of Post-Operative Endophthalmitis in Hospital Universiti Sains Malaysia, Kelantan

Authors : Lim Chang Zhen, Tai ELM, Khairy Samel
Institution : Hospital Universiti Sains Malaysia

Objective: To report the clinical features and outcome of post-operative endopthalmitis in Hospital Universiti Sains Malaysia over a 10-year period.

Method: This was a retrospective data review of medical records of patients diagnosed with post-operative endopthalmitis in Hospital Universiti Sains Malaysia from 2008 to 2017. Wilcoxon signed rank test was used to compare the visual acuity pre and post treatment.

Result: A total of 15 patients were identified. Approximately 87% (13 patients) were Malay. Males were predominant (11 patients). The mean age was 66 years old. Sixty percent of patients had medical comorbidities. The most common operation preceding endophthalmitis was cataract surgery (11 patients, 73.3%). The majority (73%) had chronic post-operative endophthalmitis, occurring at a median of 63 weeks post-surgery. The median presenting vision was 1.0 logMAR, corresponding to a Snellen visual acuity of 6/60. All patients were treated with topical and systemic antibiotics. The majority (11 patients) also had intravitreal injections of vancomycin and ceftazidime. The median final visual outcome was 0.5 logMAR (Snellen visual acuity of 6/19). There was no statistically significant difference between the presenting visual acuity and the final visual outcome (p=0.778).

Conclusion: In this review, chronic post-cataract endophthalmitis was the most common type of post-operative endophthalmitis. The majority of cases involved males. Treatment did not significantly improve the visual acuity.

14. Devastating Ocular Complication of Antiphospholipid Syndrome

Authors : Sharmini A/P Nallasamy, Loh SA, Nurhayati AK, Chiang WS
Institution : Hospital Duchess Of Kent

Objective: To illustrate a case of antiphospholipid syndrome with central retinal artery Occlusion (CRAO) in a young lady.

Method: Case report.

Result: A 26 years old, lady with history of recurrent miscarriage and amaurosis fugax, presented with left eye sudden painless loss of vision. Left eye visual acuity was counting finger and funduscopy showed feature of central retinal artery occlusion.
Right eye examination was normal and systemic examination was unremarkable. Her anti cardiolipin antibodies and lupus anticoagulant were positive. She was diagnosed antiphospholipid syndrome (APS) Prompt ocular management for her CRAO was performed. However, her visual acuity was not recover. Medically, she was given life long anticoagulant (warfarin) to prevent similar ocular complication to her fellow eye.

Conclusion: Antiphospholipid syndrome (APS) can lead to life and sight threatening condition. Therefore, co- management of obstetric, medical and ophthalmology team are essential to prevent systemic and ocular complication.

15. Intraocular Lens Scaffold and Pull-Out Technique: A Quick and Safe Approach to Acrylic Hydrophobic Foldable Intraocular Lens Explantation

Authors : Lee Wen Yee, Teh Wee Min, Yew Yih Voon, Dato' Dr Ahmad Mt Saad
Institution : University of Malaya & Hospital Sultanah Bahiyah,
Alor Setar, Malaysia

Objective: To demonstrate a safe and simple technique of acrylic hydrophobic foldable intraocular lens (IOL) exchange.

Method: Case report.

Result: A 79-year-old Malay lady underwent left eye phaecoemulsification and IOL implantation. Post-operatively, noted IOL malposition due to a broken haptic. IOL explantation was performed six days after the initial surgery. The technique involved the presence of two IOLs in the eye: the offending IOL, which was manipulated out of the capsular bag into the anterior chamber, and the corrective IOL, which was inserted into the bag. The corrective IOL acted as a scaffold for the posterior capsule and protects against vitreous prolapse in case of an open posterior capsule. A forcep was used to pull the offending IOL, with minimal IOL folding at the main wound during explantation. Day one postoperatively, the unaided vision was counting finger due to corneal oedema. Vision improved to 6/18 one week after the operation and 6/9 during post-op refraction after 2 months.

Conclusion: Several methods of explanting IOL have been described. All these methods carry the risk of compromising corneal endothelium and/or posterior capsule. We believe this scaffold and pull-out technique provides a simple and effective way to remove IOLs via small incisions, resulting in quick visual recovery and reduced risk of complications. This technique can be performed with the standard instruments used in small-incision cataract surgery without specially designed instruments. This procedure is not recommended in eyes with shallow anterior chamber due to the risk of endothelial cell loss caused by manipulation in limited space.

16. Incidence of Visual Axis Opacification in Optic Capture with Capsular Bag Fusion

Authors : A.Rahman S.A., Aizuddin A, Siti Norzalehawati S, Zuraidah M
Institution : Hospital Sultanah Nur Zahirah, Kuala Terengganu

Objective: To describe a technique of optic capture with capsular bag fusion in reducing visual axis opacification (VAO) for paediatric IOL implantation.

Method: This ongoing prospective study describes the optic capture with capsular bag fusion, in which haptics are placed in ciliary sulcus and the IOL optic is captured behind both anterior and posterior capsulotomy. This technique allows fusion of anterior and posterior edges of capsular bag in which reduces the incidence of VAO.

Result: The study comprises 9 eyes of 5 children with mean age of 18.8 months (range of 3 months old – 5years old), with distribution of 2 congenital cataracts, 2 developmental cataracts and 1 persistent fetal vasculature. The visual axis remains clear in all operated eyes up until their last follow up. Optic capture also helps to achieve stability and well centered IOL.

Conclusion: Pre-liminary result of this study showed that optic capture with capsular bag fusion helps to minimize visual axis opacification which is crucial to prevent in infant.

17. Successful Treatment of Bilateral Sixth Cranial Nerve Palsy

Authors : Khor Hui Di Md,
Jessica Mani A/P Penny Tevaraj M.Med Ophthalmology
Shuaibah Ab Ghani M.Med Ophthalmology
Institution : Hospital Wanita Dan Kanak-Kanak Sabah

Objective: To report a case of successful treatment of bilateral sixth cranial nerve palsy.

Method: Case report.

Result: A 36-year-old malay gentleman sustained bilateral sixth cranial nerve palsy following motor vehicle accident (mva) in 2013 and worsening of diplopia after second MVA in 2016. He sustained minor traumatic brain injury in both incidents. Computed Tomography (ct) brain revealed no intracranial lesion, basal skull fracture or cervical spine fracture. He underwent bilateral medical rectus recession and hummelsheim procedure in two separate settings in 2017.

Conclusion: Traumatic bilateral sixth cranial nerve is rare and can be very distressful for patient. Herein, we discuss the successful treatment to improve quality of life for the patient.

18. A 3-Year Retrospective Review of Neovascular Glaucoma Patients in Hospital Sultanah Bahiyah

Authors : Azima Bt Ahmad Shahrudin, Farrah Binti Ja'afar, Dato Hj. Ahmad Bin Mt Saad
Institution : Hospital Sultanah Bahiyah

Objective: To investigate the demographic, clinical presentation and prognostic factor of neovascular glaucoma (NVG) patients treated in Hospital Sultanah Bahiyah (HSB).

Method: We retrospectively reviewed 60 NVG patients (83 eyes) who had referred to glaucoma specialists in HSB from 1st January 2015 to 31st December 2017. All patients underwent detail history taking and comprehensive ocular examination. Examinations included visual acuity (VA), anterior and posterior segment slit lamp examination, intraocular pressure (IOP), angle structure and grading of rubeotic glaucoma as per centre classification. We analysed demographic data, clinical presentation, grading, treatment, initial/final VA and IOP.

Result: The number of referred NVG patients to the centre shows yearly increment. Diabetic eye disease was the most common cause of NVG (73.5%), followed by retinal vein occlusion (18.1%) and ocular ischemic syndrome (4.8%). Sub-analysis showed that patients who underwent Ahmad valve/ trabeculectomy with MMC had significant higher chance of VA improvement and better IOP control as compared to patients who received topical antiglaucoma / transscleral cyclophotocoagulation ($p = 0.000$). Furthermore, early referral with good VA (3/60 and better) and early stage of NVG (grade I or II) had better vision outcome ($p= 0.000$). Lower initial IOP ($IOP \leq 50$) on referral gave rise to better IOP control ($p=0.012$). However, there was no significant association between the underlying causes of NVG, age of patients and anti-VEGF combination therapy with post-treatment VA and IOP.

Conclusion: Initial VA and IOP, grading and mode of treatment were found to have significant effects on NVG-VA and IOP prognosis.

19. The Use of Nasonex Nasal Spray and Prednisolone 0.5% Eye Drops in The Management of Partially Blocked Nasolacrimal Ducts

Authors : Jun Fai Yap, Yong Zheng Wai, Qi Xiong Ng, Lik Thai Lim
Institution : Ministry Of Health Malaysia

Objective: To study the combined effects of Nasonex nasal spray and Prednisolone 0.5% eye drops in the management of adult primary acquired nasolacrimal duct obstruction.

Method: Retrospective review of case notes was performed on 52 adult patients who presented with primary partially blocked nasolacrimal duct resulting in symptomatic epiphora from January until June 2012 in Stobhill Hospital Glasgow, United Kingdom. All the 52 patients were started on both Nasonex nasal spray and Prednisolone 0.5% eye drops as the initial management. The effects of the combined treatment were noted, at least one month after being started on the medications.

Result: There were 54 partially blocked nasolacrimal ducts in the 52 patients. Out of these 52 patients, 55.5% had favourable outcome with resolved epiphora symptoms; 13% had

partial relieve of epiphora symptoms and 31.5% had no relieve of epiphora symptoms, after at least one month on the medications.

Conclusion: Both Nasonex nasal spray and Prednisolone 0.5% eye drops can be initially tried in patients with partial nasolacrimal duct blockage complaining of symptomatic epiphora, as more than half the patients having symptomatic relieve with these medications, in our experience. This will save the patient from undergoing dacryocystorhinostomy (DCR) surgery if the treatment works.

20. Demographics and Microbiological Profile of Corneal Ulcers in University of Malaya Medical Centre (UMMC)

Authors : Goh Yihui, Sujaya Singh
Institution : University Of Malaya Medical Centre

Objective: To analyse the demographics, risk factors, yield of corneal scrapping, and microbiological profiles of microbial keratitis in UMMC.

Method: Retrospective review of medical records of 33 patients (34 eyes) admitted to UMMC for microbial keratitis between 1 June 2016 to 31 December 2017 is performed. Demographics, risk factors, clinical features, corneal scrapping results and treatment were recorded.

Result: The mean age of patients was 47.5 ± 21.9 years. 58% were female and 42% were male, with the overall female to male ratio of patients being 1.36:1. Contact lens use was the major risk factor (34%), followed by ocular trauma (26%). The culture positive rate was 62%, of which 76% were Gram negative organisms, 10% were Gram positive organisms and 14% were fungus. Pseudomonas aeruginosa (57%), Moraxella species (10%) and Fusarium species (10%) were the most commonly isolated pathogens. No resistance to fluoroquinolones were identified. Negative cultures could be attributed to small size of ulcer on presentation or commencement of antibiotic treatment prior to corneal scrapping.

Conclusion: Contact lens wear was the primary risk factor for microbial keratitis in this study. Pseudomonas aeruginosa being the commonest pathogen isolated, was sensitive to the initial topical antibiotics regime practiced in this centre. Proper corneal scrapping technique and early referral to Ophthalmology centre should be advocated to increase the yield of positive cultures and improve the treatment outcome.

21. A Case of Panophthalmitis with Orbital Cellulitis Related to Erysipelothrix Rhusiopathiae Infection: A Rare Ocular Infection

Authors : Aasiah Binti Ahmad Sharifuddin,
Krishnalatha Buandasan Mmed (Ophthal),
Yanti Muslikhan Mmed (Ophthal)
Institution : Hospital Sultanah Nora Ismail

Objective: To report a case of panophthalmitis caused by Erysipelothrix rhusiopathiae (zoonoticpathogen), rarely causing ocular infection.

Method: Case report.

Result: A S7-year old lady presented with 3-days history of right eye painful loss of vision.

Visual acuity of her right eye was no light perception. There was relative afferent pupillary defect on her right eye. There was limitation of movement on all gazes with proptosis and erythematous lid swelling causing complete ptosis. She had extensive hyperemic and chemotic conjunctiva with scleral abscess. Anterior chamber was full of hypopyon and right eye intraocular pressure was 50. The fellow eye was normal.

lntravitreal injection of Vancomycin and Ceftazidime was given. Vitreous culture revealed Erysipelothrix rhusiopathiae sensitive to Vancomycin and Ceftriaxone. Urine and blood culture showed no growth. CECT orbit showed findings that are suggestive of panophthalmitis with suspicious of orbital apex syndrome. Based on clinical and Radiographical findings, a diagnosis of panophthalmitis with orbitalcellulitis and orbital apex syndrome was made.

Patient was treated with topical Ceftazidime 5% and fortified Gentamycin 0.9% together with systemic Ciprofloxacin. Based on susceptibility of organism, systemic Ceftriaxone was added. One week after treatment, there was regression of orbital cellulitis and subsequently improvement of panophthalmitis. However, her vision remain no light perception.

Conclusion: Erysipelothrix rhusiopathiae infection is a rare but serious ocular infection. Despite aggressive treatment, panophthalmitis has a poor visual outcome.

22. Prevalence and Causes of Visual Impairment and Blindness in an Urban Chinese Population: The Singapore Chinese Eye Study

Authors : Sing Hui Lim, Yih-Chung Tham, Tien Y. Wong, Ching-Yu Cheng
Institution : Singapore National Eye Centre

Objective: To determine the prevalence and causes of blindness and visual impairment in the Singapore Chinese population and compare with a previous population-based study (the Tanjong Pagar Survey) conducted in the 90s.

Method: In a population-based survey of 4605 eligible individuals, 3353 Chinese adults 40 years or older underwent standardized examinations, including measurement of presenting visual acuity (PVA) and best-corrected visual acuity (BCVA). Primary causes and factors associated with visual impairment and blindness were also determined.

Result: Based on PVA, the age-standardized prevalence was 17.7% for visual impairment and 0.6% for blindness. Based on BCVA, the age-standardized prevalence was 3.4% for visual impairment and 0.2% for blindness. These rates were slightly lower than the Tanjong Pagar Survey, but the difference was not statistically significant. Cataract was the principal cause of blindness (50.0%) and visual impairment (69.8%), followed by age-related macular degeneration (ARMD) (25.0%, 0.9%) and diabetic retinopathy (12.5%, 3.4%). In the Tanjong Pagar Survey, while cataract was the leading cause of low vision (58.8%), glaucoma was the main cause of blindness (60.0%), followed by cataract (20.0%) and ARMD (20.0%). Factors associated with visual impairment included older age, lower income, lower education, and smaller housing.

Conclusion: Although the prevalence of visual impairment and blindness in Chinese residing in Singapore was low, the estimates were similar to those from a previous study conducted in the 1990s. Cataract is the current leading cause of blindness. This suggests the need for prioritizing eye care surgical services to reduce blindness in the community.

23. Correlation of Non Invasive Tear Breakup Time Measured by Tomey RT7000 and Oculus Keratograph 5M

Authors : Benjamin Au, Louis Tong
Institution : Singapore National Eye Centre

Objective: Our aim is to compare the correlation of tear break up time (TBUT) measurements by two different devices and observe if there are differences in results based on algorithm and technique.

Method: Prospective data of a single tear break up time measured by Tomey RY7000 and the Oculus Keratopgraph 5M was recorded and comparative analysis performed. Readings for the two machines were performed in random order.

Result: Mean TBUT measured by the Oculus Keratograph 5M was significantly higher at 9.06 (SD5.82) seconds compared to 4.76 seconds (SD 6.03) taken by the Tomey RT7000 ($p<0.05$). However a Bland Altman anayslsis showed no correlation of or patterns in the TBUT measured by both devices.

Conclusion: No correlations of patterns of non invasive TBUT measurements from both devices despite Oculus Keratograph tended to measure longer times. Variations may be due to the difference in technique in algorithms with the Oculus using placido rings over entire corneal surface compared to the Tomey which uses central 11 mires.

24. Cytomegalovirus Corneal Endotheliitis Following Descemet's Membrane Endothelial Keratoplasty

Authors : Tan Tien-En, Professor Tan Tiang Hwee Donald
Institution : Singapore National Eye Centre

Objective: We report 4 cases of Cytomegalovirus (CMV) corneal endotheliitis following Descemet’s membrane endothelial keratoplasty (DMEK).

Method: Retrospective interventional case series. Case records were reviewed retrospectively.

Result: Patient age ranged from 68 to 77 years. Three patients were previous failed grafts – one with 1 failed penetrating keratoplasty (PK), one with 2 failed PKs, and one with 2 failed Descemet’s stripping endothelial keratoplasties. The remaining patient had pseudophakic bullous keratopathy. All 4 DMEK procedures were intra-operatively uncomplicated, with clear DMEK grafts prior to presentation. Time from DMEK to presentation varied from 5 to 15 weeks. Presenting features included corneal edema, pigmented keratic precipitates, mild anterior uveitis and raised intraocular pressure. 2 cases were treated initially for graft rejection, with corticosteroids. Both cases worsened, and delayed diagnoses of CMV corneal endotheliitis were made. 2 other cases were diagnosed at initial presentation. All 4 cases

were confirmed by anterior chamber paracentesis and polymerase chain reaction (PCR) testing for CMV. All 4 cases were treated with topical ganciclovir gel and oral valganciclovir. 3 cases showed clinical resolution, with no recurrence at last follow-up. 1 case failed to respond to topical ganciclovir gel, oral valganciclovir, and intravenous ganciclovir and foscarnet.

Conclusion: To our knowledge, we present the first report of CMV corneal endotheliitis after DMEK. Clinical features of CMV corneal endotheliitis can be difficult to differentiate from graft rejection. PCR testing of aqueous humor can help to confirm the diagnosis. A high index of suspicion and early diagnosis are important to reduce corneal endothelial cell loss and morbidity.

25. Novel Technique Of Dog Tick Removal from the Eyelid

Authors : Foo Li Lian, Daniel Ting, Ng Wei Yan, Quah Boon Long
Institution : Singapore National Eye Centre

Objective: To describe a case of eyelid tick attachment and the en bloc removal with monopolar cautery.

Method: Case report.

Result: A 2-year-old girl presented was found to have a dog tick embedded in her left upper eyelid. En bloc tick removal was carried out using monopolar cautery through the delivery of a few sequential thermal energy pulses to the tick's body for it to lose its grip on the host tissue.

Conclusion: The use of monopolar cautery is a novel and safe technique to allow en bloc tick removal while minimizing trauma to the surrounding ocular tissues thereby preserving ocular architecture.

26. Retinopathy Associated with Acute Myocardial Infarction

Authors : Farah Ibrahim, Prof Lee Shu Yen
Institution : Singapore National Eye Centre

Objective: To report a case of retinopathy following percutaneous coronary intervention for acute myocardial infarction.

Method: A 42-year old gentleman presented with bilateral painless blurring of vision following angiogram and stenting for acute myocardial infarction. He was an ex-smoker with underlying diabetes, hypertension, obesity and obstructive sleep apnoea. On examination visual acuity was 6/45 pinhole 6/24 bilaterally. Anterior segment examination of both eyes were normal. Fundal examination showed bilateral peripapillary cotton wool spots with superficial retinal haemorrhages and bilateral cystoid macula oedema on optical coherence tomography. Optic disc and blood vessels were normal.

Result: The patient was observed and his retinopathy spontaneously improved over 3 months. His visual acuity improved to 6/15 in the right eye and 6/12 in the left eye, with resolution of cystoid macula oedema.

Conclusion: This form of transient retinopathy should be considered in patients undergoing percutaneous coronary intervention after acute myocardial infarction, and can be differentiated from other forms of retinopathy by the absence of other features that commonly coexist.

27. Retrospective Study of Iris Fixated Intraocular Lens

Authors : Nathalie Chiam, Melissa Wong, Soon-Phaik Chee
Institution : Singapore National Eye Centre

Objective: To report the outcome of iris sutured intraocular lens (ISIOL)

Method: Retrospective interventional case series.

Outcomes of consecutive cases of ISIOLs that underwent surgery at the Singapore National Eye Centre (SNEC) from July 2004 and October 2016 by a single surgeon were studied. Data collected included patient demographics, intraocular lens status, pre and post-operative best corrected visual acuity (BCVA), peri-operative complications.

Result: 194 eyes of 177 patients underwent ISIOL, of which 4 eyes underwent surgery twice. Two patients had bilateral involvement. Mean age was 62.5 ± 0.91 years. Mean duration of follow-up 27.4 ± 1.7 months. Majority 128 (64.7%) had undergone apparently routine cataract surgery, 56 (28.3%) had undergone complicated cataract surgery, 7 (3.5%) were aphakic from previous congenital cataract surgery while 7 (3.5%) had dislocated/subluxated crystalline lenses or traumatic cataracts. Mean pre and one month post-operative BCVA was LogMAR 0.53 ± 0.03 and LogMAR 0.25 ± 0.02 respectively. Post-operative complications included elevated intraocular pressure (n=49, of which 46.9% were transient), transient cystoid macular oedema (n=20, 10.1%) transient cornea oedema (n=18, 10.1%), optic capture (n=14, 7.1%) and recurrent subluxation of ISIOL (n=15, 7.5%). Further surgical intervention was required by 5 of 14 cases with optic capture and 12 of 15 cases with subluxated ISIOL.

Conclusion: ISIOL is associated with good visual outcomes and low rates of serious post-operative complications.

28. A 3-Year Retrospective Review of Fungal Keratitis at Hospital Universiti Sains Malaysia

Authors : Tan Kaai Voon, Siva Chitamparam A/L C Sivagnanam (Md),
Khairy Shamel Sonny Teo (Mmed),
Associate Professor Mohtar Ibrahim (MS)
Institution : Hospital Universiti Sains Malaysia

Objective: To review the trends, risk factors, causative organisms, treatment, and outcomes of fungal keratitis at Hospital Universiti Sains Malaysia.

Method: A retrospective review of the records of consecutive patients diagnosed with fungal keratitis at Hospital Universiti Sains Malaysia from January 2015 to December 2017.

Result: A total of 136 patients were diagnosed with infective keratitis during this period. Twenty-seven patients (19.9%) were treated with fungal keratitis. The majority of patients were aged between 21 to 77 years old, and 82% were male. The most common predisposing factors for developing fungal keratitis in our patients was trauma (63%). Fusarium (37%) was the most commonly isolated genus, followed by non sporulating fungi (18.5%), Curvularia (18.5%), Candida (11%), Aspergillus (7.4%) and Phoma sp (3.7%). Visual acuity was worse than 1/60 in 41% of patients at presentation. The clinical outcomes of healed scars was achieved in 81.4% patients. Final visual acuity was 6/12 or better in 33.3% of patients treated with medication alone. Intrastromal Amphotericin B was given in 15% of patients. 44% percent of medically treated patients had dual topical antifungal therapy. Gutt Fluconazole 0.2% and Amphotericin B 0.15% were the most commonly used drugs.

Conclusion: In our study, the majority of patients were middle-aged men involved in agricultural work. Trauma was the leading predisposing factor and Fusarium species remained the most commonly isolated fungal in our keratitis patients especially during wet Monsoon season. We should raise public awareness in order to formulate early diagnosis and treatment.

29. Associations Between Sleep Duration, Sleep Quality And Diabetic Retinopathy

Authors : Nicholas Tan, Merwyn Chew, Yih-Chung Tham, Charumathi Sabanayagam
Institution : Singapore Eye Research Institute

Objective: Abnormal durations of sleep have been associated with risk of diabetes. However, it is not clear if sleep duration is associated with diabetic retinopathy (DR).

Method: In a cross-sectional study, we included 1,231 (Malay, n = 395; Indian, n = 836) adults (mean age 64.4 9.0 years, 50.4% female) with diabetes from the second visit of two independent population-based cohort studies (2011-15) in Singapore. Self-reported habitual sleep duration was categorized as short (<6 h), normal (6 h <8), and long (≥8 h). Questionnaires were administered to detect risk of obstructive sleep apnea (OSA), excessive daytime sleepiness, and insomnia, all of which may indicate poor quality of sleep. The associations between sleep-related characteristics with moderate DR and vision-threatening DR (VTDR) were analysed using logistic regression models adjusted for potential confounders.

Result: Prevalence of moderate DR and VTDR in the study population were 10.5% and 6.3% respectively. The mean duration of sleep was 6.4 ± 1.5 h. Compared to normal sleep duration, both short and long sleep durations were associated with moderate DR with multivariable odds ratio (95% confidence interval) of 1.73 (1.03 – 2.89) and 2.17 (1.28 – 3.66) respectively. Long sleep duration (2.37 [1.16 – 4.89]), high risk of OSA (2.24 [1.09 – 4.75]), and excessive daytime sleepiness (3.27 [1.02 – 10.30]) were separately associated with VTDR.

Conclusion: Sleep duration had a U-shaped association with moderate DR; long sleep duration, excessive daytime sleepiness and high risk of OSA were positively associated with VTDR.

30. A Rare Case of Bardet-Biedl Syndrome Presenting with Retinitis Pigmentosa

Authors : Nurul 'ashikin Bte Abdullah, Vanitha Ratnalingam
Institution : Hospital Sungai Buloh

Objective: To highlight the ocular manifestations and clinical features of Bardet-Bield Syndrome.

Method: A case report.

Result: A 17-year-old boy, presented with gradual onset painless blurring of vision in both eyes for seven years. He denied any previous eye trauma and has no similar family history. On ocular examination, his best corrected visual acuity was 1/60 bilaterally. Anterior segment examination revealed bilateral posterior subcapsular cataract whereas fundus examination showed waxy pallor optic disc, attenuated vessels and bony spicules. On systemic examination, patient appeared immature in behaviour, obese and has polydactyly on both hands and feet. Electroretinogram confirmed the diagnosis of retinitis pigmentosa. The patient and his family has been counselled regarding the poor visual prognosis. He is currently attending a special school and under follow up paediatric, dietitian and sport medicine team.

Conclusion: Bardet-Bield syndrome is a rare inherited disorder that may present with various systemic anomalies. As the prognosis is poor with a reduced survival rate and death often early in life, it is important for ophthalmologists to be aware of the ocular and systemic findings in order to make early diagnosis.

31. Choroidal Hypoperfusion and Posterior Ischaemic Optic Neuropathy Following Facial Hyaluronic Acid Filler Injection - A Case Report

Authors : Loo Yun Hua, Farah Ibrahim, Sharon Tow, Sunny Shen
Institution : Singapore National Eye Centre

Objective: Facial dermal filler injections are one of the most commonly performed cosmetic procedures in aesthetic medicine. Even though the injections are generally safe, severe ocular complications associated with these procedures have been reported. These include ophthalmic artery occlusion, central or branch retinal artery occlusion, anterior and posterior ischaemic optic neuropathy, as a result of retrograde embolization of filler material into the vasculature.

Method: This is a case study of a patient who present to the Singapore National Eye Centre.

Result: A 29 year old lady received facial hyaluronic acid injection and subsequently developed sudden monocular vision loss secondary to choroidal hypoperfusion and posterior ischaemic optic neuropathy. There was also restriction in eye movements of the affected eye. The patient received retrobulbar hyaluronidase injection and hyperbaric oxygen therapy to restore retinal perfusion. The best correct visual acuity improved significantly from counting fingers at half a metre on initial presentation of 6/9 vision after treatment. There was also resolution of the ophthalmoplegia.

Conclusion: Although rare, it is important for aesthetic practitioners to counsel patients receiving filler injections about associated ocular adverse effects including visual loss. Incidence of vascular occlusion events can be reduced by proper injection techniques and early recognition of ocular complications coupled with prompt treatment may help reduce ischaemia time.

32. Qualitative Assessment of Cross-Sectional Vs Circumferential Imaging Using Swept-Source Optical Coherence Tomography in Angle Closure

Author : Christine Yau Wen Leng
Institution : Singapore National Eye Centre

Objective: To compare the agreement of using conventional 2 frames imaging (1 angle image per quadrant), versus novel circumferential 360o imaging of the anterior segment (128 frames or 256 angle images) using swept-source optical coherence tomography (SSOCT) against the gonioscopic reference standard.

Method: This cross-sectional study included 147 subjects recruited from glaucoma clinics in Singapore. Subjects underwent dark-room gonioscopy and anterior segment OCT (AS-OCT) using swept-source Fourier-domain OCT in one randomly selected eye. Each of the 128 frames (256 angles) were manually analysed qualitatively to determine if the angles were opened or closed based on presence of irido-trabecular contact. All 256 angles were divided into 4 quadrants (superior, nasal, inferior, temporal) and angle status per quadrant was determined. 2 frames which represented conventional AS-OCT imaging were selected from each sample. Agreement Coefficient Statistics 1 (AC1) was performed to compare at least two quadrant angle closures by all methods.

Result: Gonioscopic angle closure was noted in 25.2% (37/147) of the eligible eyes. Conventional 2 frames imaging method diagnosed significantly more closed angles (64/147, 43.5%) than circumferential imaging (56/147, 38.1%, McNemar's test, p=0.039). Both were in moderate agreement to gonioscopic angle closure (AC1 - 0.461 and 0.467) while having substantial agreement between each other (AC1-0.842). Angle status was difficult to assess in 5.2% (Range - 0 to 39.8) images in circumferential imaging.

Conclusion: Significant discrepancy was noted between circumferential imaging and gonioscopy. There is a need to standardise gonioscopic methodology to avoid misdiagnosis. Conventional 2 frames imaging may over diagnose angle closure compared to circumferential imaging.

33. Comparison of Single-field with Two-field Mydriatic 45-degrees Digital Fundus Photography for Diabetic Retinopathy Screening

Authors : Shaun Sim, Carol Cheung, James Goh Kang Hao, Wong Tien Yin
Institution : Singapore National Eye Centre

Objective: To assess the accuracy of diabetic retinopathy (DR) grading using single-field compared with two-field digital fundus photography in DR screening.

Method: 128 participants recruited from the Singapore integrated Diabetic Retinopathy Screening Program (SiDRP) had digital fundus photographs taken. Single-field and two-field

fundus photographs from 290 eyes were assessed independently in a masked fashion by an ophthalmologist for presence of DR and DR severity according to the International Clinical Diabetic Retinopathy Severity Scale. The sensitivity, specificity, positive predictive values, negative predictive value and 95% confidence intervals were calculated. The concordance of DR grade between single-field and two-field fundus photography was calculated.

Result: Single-field fundus photography had a sensitivity of 80.0% (95% C.I. 73.4 – 85.4), specificity of 100%, positive predictive value of 100% (96.8 – 1.0), negative predictive value of 73.9% (65.8 – 80.7) and accuracy of 87.2% (83.4 – 91.1). The agreement between the degree of DR by single-field and two-field fundus photography was good (weighted kappa statistic 0.72, 95% C.I. 0.641-0.803). Compared with two-field fundus photography, 77 eyes had lower DR grade (19 mild NPDR, 38 moderate NPDR, 18 severe NPDR, 2 PDR) by single-field fundus photography. Of 142 eyes classified as no DR by single-field fundus photography, 37 (26.1%) had DR by two-field fundus photography.

Conclusion: Single-field fundus photography underestimated DR severity in approximately 1 in 4 eyes, hence affecting both referral threshold for further ophthalmologic evaluation and preventable visual loss from DR. The use of two-field fundus photography for DR screening is encouraged in primary care setting.

34. Effect of Gennotype on Progression of Fuch's Endothelial Corneal Dystrophy

Authors : Soh Yu Qiang, Gary Peh, Eranga Vithana, Vinod Mootha, Jodhbir Metha
Institution : Singapore National Eye Centre

Objective: Fuchs' Endothelial Corneal Dystrophy (FECD) is characterized by Descemet's membrane guttae, endothelial cell loss and corneal edema. Recently, a CTG trinucleotide repeat expansion in the TCF4 locus within chromosome 18q21.1 ('CTG 18.1') has been identified in association with FECD, with evidence of a correlation between expansion size and disease severity. In this longitudinal study, we investigated the relationship between CTG 18.1 repeat expansion size and FECD progression, using central corneal thickness (CCT) as an indicator of disease severity.

Method: Patients diagnosed with FECD, between November 2004 and April 2016, were recruited. Baseline CTG 18.1 repeat length was characterized using short tandem repeat and triplet repeat-primed polymerase chain reaction assays. CCT was measured by the ultrasound pachymeter at baseline and yearly thereafter. Eyes with previous cataract extraction surgery or keratoplasty were excluded, as was CCT data collected following cataract extraction surgery or keratoplasty during the follow-up period.

Result: A total of 41 eyes were recruited, with a mean duration of follow-up of 4.17 years (range: 2 – 6 years). The mean number of CTG repeats was 36.6. There was an increase in CCT over time for all patients ($p<0.001$); eyes from patients with at least one allele at the CTG 18.1 locus with repeat length greater than or equal to 37 ('L≥37') demonstrated faster rates of increase in CCT compared to those with fewer than 37 repeats ('L<37') ($p=0.001$).

Conclusion: CTG 18.1 repeat length may be useful for the prognostication of FECD progression, with respect to development of corneal edema.

35. Evaluating the Effect Of Ziv-Aflibercept on Human Retinal Pigment Epithelium Cells Viability In-Vitro

Authors : Foo Hui Xian Valencia, Yasuo Yanagi, Cheng Wei
Institution : Singapore National Eye Centre

Objective: Several clinical studies investigated the safety of Ziv-aflibercept for intravitreal injection. However, the safety of the hyperosmotic buffer (1,000mOm/kg) of ziv-aflibercept has not been fully assessed. Thus, the current study evaluates the safety profile of Ziv-aflibercept on primary human retinal pigment epithelium (pHRPE) cells.

Method: pHRPE cells were exposed to Ziv-aflibercept (at 1x and 1/3x clinical concentrations), 20% Mannitol (osmotic control: 1,000mOsm/kg) and cell medium (control). Colorimetric WST-1 cell proliferation and lactate dehydrogenase (LDH) cytotoxicity detection assays were performed at a 1-week time point to evaluate the cytotoxic effects of Ziv-aflibercept on pHRPE. Statistical analysis was carried out using Kruskal Wallis test.

Result: At 1 week, there were no significant differences in the viability of pHRPE cells after Ziv-aflibercept (0.97 fold vs control: P>0.05) or 20% Mannitol (0.92 fold vs control: P>0.05). LDH assay disclosed 20% Mannitol was cytotoxic on hRPE cells (0.82 fold vs control; P<0.05), but not Ziv-aflibercept (0.91 fold vs control: P>0.05).

Conclusion: We did not detect any toxic effects of Ziv-aflibercept on hRPE under the current experimental conditions. However, our study clearly demonstrated that hyperosmotic solution (20% mannitol) is toxic to HRPE cells.

36. Functional and Psychosocial Impact of Strabismus on Singaporean Children

Authors : Bryan Sim, Guan-Hui Yap, Audrey Chia
Institution : Singapore National Eye Centre

Objective: To measure the impact of strabismus in XXXX children using 2 quality-of-life instruments; the Intermittent Exotropia Questionnaire (IXTQ) and Adult Strabismus 20 Questionnaire (AS20).

Method: 60 children (aged 5-16 years) with strabismus were recruited together with 60 age-matched children with eye conditions other than strabismus and amblyopia (Control A), and 60 with no known eye conditions (Control B). All children completed the IXTQ while children aged 8-16 years also completed the AS20 questionnaire. Their parent completed a parental-proxy IXTQ (pp-IXTQ) and AS20 (pp-A20), and a parental IXTQ (PIXT).

Result: Children with strabismus had lower IXTQ (70.1+/-19.0) and AS20 (80.0+/-13.8) scores than children in Control B (IXTQ 90.3+/-11.8, p=<0.001 and AS20 90.0+/-10.9, p=<0.001) and Control A (IXTQ 80.6+/-14.9, p=0.001 and AS20 81.6+/-18.3, p=0.691). In children with strabismus, child IXTQ scores were significantly lower than parental-proxy scores (70.1+/-19.0 vs 76.4+/-15.8, p=0.026) but there was no difference in Control A, Control B or with AS20 scores. Item analysis suggests children were more worried about their eyes, what people thought about them and about making friends, while parents were more concerned about their child's eyesight and whether surgery was required.

Conclusion: The IXTQ and AS20 were more effective in differentiating between children with strabismus and those with no eye condition, than between children with strabismus and other eye conditions. Parental-proxies were quite accurate in predicting child scores. However, parents were more likely to underestimate the psycho-social impact of strabismus on their children.

37. Reducing Preparation Time for Wheelchair Patients to be Examined at the Slitlamp

Authors : Low Jin Rong, Wei Yan Ng, Li Lian Foo, Fiona Pin Miao Lim, Noor Affizan, Ian Yew San Yeo
Institution : Singapore National Eye Centre

Objective: To evaluate the time reduction for wheelchair patients to be examined at the slitlamp with an improved clinic layout and use of a wheelchair-friendly slitlamp table.

Method: Time taken for wheelchair patients to enter the consultation room and be ready for slitlamp examination was measured before and after interventions over a 5-month period in Singapore National Eye Centre. The interventions included (1) an improved clinic layout to prevent unnecessary movement of the wheelchair within the consultation room, and (2) a slitlamp table which can accommodate the wheelchair at the slitlamp to avoid patient transfer to a separate chair for examination. Mean time taken between the groups was analysed using paired T test.

Result: Forty and 27 patients were included before and after interventions, respectively. In the post-intervention group, 17 had improved clinic layout and 10 had both improved clinic layout and wheelchair-friendly slitlamp table. Mean preparation time taken before intervention was 50.55s. This reduced to 26.96s after an improved clinic layout ($p=0.022$) and to 22.23s after an improved clinic layout and use of a wheelchair-friendly slitlamp table ($p=0.006$). No accidental falls occurred.

Conclusion: Time taken for wheelchair patients to be examined at the slitlamp was reduced with an improved clinic layout and use of a wheelchair-friendly slitlamp table. These may reduce delay in patient consultation and waiting time and prevent accidental falls during transfer of patients.

38. Keratoconus Endophenotypes In A Healthy Aging Population

Authors : Claire L.Wong, Ekaterina Yonova, Katie M. Williams, Mark Simcoe, Diana Kozareva, Christopher Hammond
Institution : Twin Research and Genetic Epidemiology

Objective: Studying disease endophenotypes in population-based studies has identified genetic variants associated with eye conditions, such as central corneal thickness (CCT) and keratoconus. This study aimed to assess topographic measures, Keratoconus Prediction Index (KPI), apical gradient of curvature (AGC) and Symmetry Index (SI), as possible Keratoconus endophenotypes.

Method: Corneal topography and wavefront data from the Visionix VX120 autorefractor was analysed for 1430 twins (91% female, mean age [range] 58.9 [18.5-91.7]) from the TwinsUK

cohort. Normality tests, correlations, association between age, CCT, rank normalised AGC and SI, and t-tests were conducted with RStudio. Falconer's formula was used to calculate broad-sense heritability (H2) for 414 monozygotic and 300 dizygotic twin pairs.

Result: CCT was normally distributed (P=0.3), had mean [SD] of 537.4µm [34.2µm], decreased with age (β=-0.17, P=0.01), and H2=0.72. AGC and SI were not normally distributed (P<0.0001), did not vary with age, had median [range] of 1.3 [-16.1:19.6] and 0.33 [-14.2:15.5] and H2=0.12 and 0.37 respectively. AGC and SI were weakly correlated (rho=0.13) though neither was correlated with CCT or KPI. KPI followed a trimodal distribution with 30% of participants predicted to have at least one eye affected, though none had keratoconus. These individuals were on average older, had thinner corneas and lower K (P=0.003, P=0.02 and P<0.0001 respectively). KPI (rho_c) H2=0.60. Correlation between both eyes was strong for CCT (r2=0.82), AGC and SI (rho=0.62 both), and KPI (rho_c=0.55).

Conclusion: In summary, KPI, AGC and SI are poor endophenotypes for keratoconus. CCT, while not ideal, may still be the most reliable keratoconus endophenotype to date.

39. Mitomycin C Injections vs Sponges in Trabeculectomy: Which is Better?

Authors : Lee Yi Fang, Monisha Esther Nongpiur, Shamira A. Perera
Institution : Singapore National Eye Centre

Objective: Reducing conjunctival scarring is important in ensuring good longer term outcomes after trabeculectomy. The use of mitomycin-C (MMC) sponges carries the risk of retained sponge material, and results in dose variability if bleeding occurs. Injections are quicker and safer for staff as less MMC can evaporate into the air compared to sponges. This retrospective audit compared the visual outcomes, post-operative intraocular pressure (IOP) and adverse events in patients who underwent trabeculectomy with MMC sponges, against those who received MMC injections.

Method: We evaluated 120 eyes which had trabeculectomy or combined phacoemulsification and trabeculectomy. 60 eyes received treatment with 0.4mg/ml MMC sponges for 2 minutes and the other 60 eyes received 0.2ml of 0.2mg/ml subconjunctival MMC injections. Post operative visual acuity and IOP at 1 year were compared. Adverse events occurring within the first year were also evaluated.

Result: Both groups had good visual outcomes at 1 year, where 73.3% of patients in each group achieved visual acuity of 6/12 or better (p=1). Both groups also showed significant IOP reduction. Postoperatively, most patients in both groups achieved an IOP of 15 or less without medications (injection group 88%, sponges group 80%, p=0.19). There were few postoperative events, including overfiltration, wound leak and hyphaema (injection group 16.7%, sponges group 13.4%; p=0.12).

Conclusion: MMC injections are equivalent to sponges during trabeculectomy, in allowing good visual outcome and IOP reduction with a low risk of adverse events at one year. The use of MMC injections offers advantages to the assisting staff, patient and doctor.

40. Absence of Classic Symptoms Does Not Exclude Hydrocephalus in Young Patient

Authors : Muhammad Aizuddin Bin Ahmad,
Siti Norzalehawati S. MD(UKM) MS Opthal (UKM)
Institution : Hospital Sultanah Nur Zahirah

Objective: This study is to emphasize the significance of thorough eye examination during routine clinic follow up of surgically treated congenital hydrocephalus in nonverbal child to detect ocular sign that is suggesting sinister systemic complication.

Method: A case report.

Result: We report the case of 8 years old girl who was surgically treated for congenital hydrocephalus, who has absence classic symptoms of increased ICP and stable visual acuity. Funduscopy examination revealed incidental finding of bilateral optic disc swelling on her rountine paediatric ophthalmology clinic follow up.
An urgent CT brain was done noted to have severe obstructive hydrocephalus and the VP shunt or reservoir was not seen in the study. The patient was then referred to Neurosurgery team and urgent VP shunt was done on the same day. Intraoperatively, there was very high CSF pressure measurement.
Postoperatively, she was doing well and funduscopy examination revealed complete resolution of papilledema. Her visions remain stable.

Conclusion: Traditionally, visual disturbances, headache and vomiting are classic features of hydrocephalus. Absence of classic features is not uncommon in younger patient. It is very crucial to perform thorough eye and dilated fundus examination on each visit especially in children to look for papilledema even in absence of symptoms and good vision, so that timely ICP lowering measures can be instituted to preserve vision and save life.

41. Improving the Rates of Electronic Results Acknowledgement at a Tertiary Eye Care Center

Authors : Val Phua, Benjamin Au, Soh Yu Qiang, Rahat Husain
Institution : Singapore National Eye Centre

Objective: Achieving 100% electronic acknowledgement of abnormal results within 48hours at Singapore National Eye Centre.

Method: Root cause analysis was perform to identify contributory factors. Pareto principle was then used by the authors to identify the main contributory causes illustrated with an ishikawa diagram. Changes were implemented and the results monitored over 3 Plan Do Study Act (PDSA) Cycles.

Result: With the changes implemented from each PDSA cycle, there was evidence of improvement. This data was plotted in a run chart. Post PDSA cycle 3, the number of unacknowledged results was significantly different from that of baseline data. Pre-intervention, the weekly number of unacknowledged results varied between 193 and 617. After 3 PDSA cycles, the number of unacknowledged abnormal results dropped to <5 a week. The effect of the changes implemented was also shown to be sustainable.

Conclusion: High rates (near 100%) of abnormal result acknowledgment is shown to be possible and sustainable from this project. Patient safety is paramount and should not be compromised by unacknowledged results.

42. Primary Ocular Tuberculosis: The Great Ancient Masquerader

Authors : Ui Lyn Loh, Nadras Indira, CM Yeong, Nadarajah Gaayathri, Qamaruddin Fazilawati, Hussein Adil
Institution : Hospital Tengku Ampuan Rahimah, Klang
Universiti Sains Malaysia, Kubang Kerian

Objective: Tuberculosis, an ancient disease, still thrives today as the leading infection caused by Mycobacterium tuberculosis. Diagnosis of ocular tuberculosis poses great challenge due to varied clinical presentation. To report clinical presentation of 3 primary ocular tuberculosis cases in Hospital Tengku Ampuan Rahimah, Klang.

Method: Retrospective review.

Result: We report 3 primary ocular tuberculosis cases with different ocular presentation; conjunctival abscess, sclerouveitis and occlusive vasculitis. All 3 cases have no symptoms, clinical examination and investigation were negative for pulmonary tuberculosis. They presented with unilateral acute painful red eye. First case presented with right eye good vision of 6/9, swollen upper lid, localised hemorrhagic and tender conjunctival swelling at 10 o'clock next to the limbus. Anterior chamber showed fine non-granulomatous keratic precipitates with occasional cells. Posterior segment was normal. Second case had right eye poor vision of 6/60 (Pinhole 6/36). Anterior segment noted posterior synechiae, non-granulomatous keratic precipitates and AC cells 1+. Posterior segment showed bilateral vitritis with right optic disc swelling, choroidal folds, cystic macula oedema and positive T-sign on B-scan. The third case presented with bilateral good vision of 6/6. Anterior segment of right eye showed AC cells 2+. Left eye anterior segment was normal. Posterior segment showed bilateral multiple peripheral choroiditis with peripheral vasculitis in all four quadrants. All cases had positive Mantoux test. Anti-tuberculous treatment was promptly started and all patients showed great clinical improvement.

Conclusion: Review shows diversified clinical presentation of ocular tuberculosis. High index of suspicion is required with prompt anti-tuberculous therapy for good clinical outcome.

43. A Case Series Of Orbital Solitary Fibrous Tumour

Authors : Ting Xiao Wei, Shankari Sothirachagan, Wan Mariny Binti W Md Kasim
Institution : Hospital Serdang

Objective: To describe patient demographics, clinical findings, investigation and surgical outcomes of seven cases of orbital solitary fibrous tumour.

Method: A retrospective review of seven cases of orbital solitary fibrous tumour which were followed up in our center, a national oculoplastic center from years 2008-2017.

Result: The study included seven patients with ages between 21-35 years old, 2 were males and 5 were females. All 7 patients presented with painless chronic unilateral proptosis, with no visual impairment. Computed Tomography of the orbit was performed in all 7 patients, which showed contrast enhancing localized extraconal, intraorbital mass. All patients underwent orbitotomy and excisional biopsy. Intraoperative findings were consistent for all 7 cases whereby the mass appeared vascularized and encapsulated. The tumors were excised and sent for histopathological examination. 5 cases had microscopic findings of spindle shaped cells. All cases had positive staining for CD 34, 6 positive for CD 99, 5 positive for BCL-2 and 5 patients had positive staining for S-100. Of the 7 cases, one case was referred as recurrent proptosis , while the other 6 cases were first presentations. 3 of the patients had recurrence of the tumour within 2 years.

Conclusion: Solitary fibrous tumour is a rare mesenchymal tumour with a pleural origin. The orbit is the most common extrapleural site of the tumour and they are usually benign. Immunohistochemisty is important to differentiate it from other more aggressive orbital tumours. Regular follow up is important to monitor for recurrence.

44. A Rare Case of Orbital Intramuscular Angioma

Authors : Suraya Bt Hashim, Adlina Abd Rahim, Rosniza Ab Razak
Institution : Hospital Serdang

Objective: To present a rare case of orbital intramuscular angioma.

Method: Case Report.

Result: A 12 years old boy with underlying bronchial asthma, presented with painless progressive enlarging swelling over nasal bridge and right eye since birth. Best corrected vision OD 6/18 , OS 6/6. Right eye showed non tender mass at medial canthal area with no skin changes. Presence of multiple cystic lesion subconjunctivally near the medial canthus area. Anterior chamber and posterior chamber bilateral eye was unremarkable. CT scan showed soft tissue swelling at the medial part of the right orbit involving the medial part of upper and lower eyelid and medial canthal region , measures approximately 2.1cm x 2.4cm x 3.9cm with blocked nasolacrimal duct suggestive of mucocele. Excision biopsy was done, mass mixed with fibrosis tissue and microcyst with no definite plane with underlying skin and orbicularis oculi muscle. Histopathology examination of medial canthal mass showed benign vascular lesion likely intramuscular angioma and conjunctival part consistent with lymphangiectasia. 3 weeks post operation , he developed wound breakdown and exploration under GA was done. Intraoperatively showed multiple small slow oozing from remnant of the lesion with multiple cyst surrounding wall of cavity , bluished lesion and small telangiectatic vessel at upper lid.

Conclusion: Intramuscular angioma is a rare special form of hemangioma. It grow expansively between the muscle fibers, thereby destroying the tissue. This simulates malignant infiltrating growth. Spontaneous remissions are not described for intramuscular angioma. The tumor has a high recurrence rate. Thus, radical excision is indicated.

45. The Effect of Refractive Error on Pupillary Responses

Authors : Chew Cher Yong Milton, Rukmini A.V., Ramond P. Najjar, Dan Milea
Institution : Singapore National Eye Centre

Objective: Chromatic pupillometry is an emerging technology with the potential ability to diagnose and prognosticate retinal and optic nerve diseases. We aim to determine if refractive error influences the pupillary light reactions to different wavelengths of light as measured by chromatic pupillometry.

Method: A prospective study of 145 normal subjects consecutively recruited. Chromatic Pupillometry was performed with both blue (469nm) and red (631nm) light using a modified Ganzfeld dome. Each light stimulus was increased gradually over 2 minutes to active the rods, cones and intrinsically photosensitive retinal ganglion cells (ipRGCs) that mediate the pupillary light reflex. Pupil diameter was recorded using an infrared pupilometer.

Result: The baseline pupil diameter in darkness for myopes was significantly larger compared to hyperopes (5.87mm ± 0.86mm vs 5.44mm ± 0.89mm, p=0.015). Subjects with higher myopia had a larger baseline pupil diameter (low myopia = 5.86mm ± 0.93mm, moderate myopia = 6.00mm ± 0.96mm, high myopia = 6.04mm ± 0.71mm, p=0.019).

Pupillary light responses to blue and red light was not influenced by the degree of refractive error, and had similar dose-response curves.

Conclusion: Pupil size is affected by refractive error, with higher myopia associated with larger pupil sizes. However, pupillary responses to high-irradiance blue and red light were not affected by refractive error. Chromatic pupillometry remains a useful and accurate tool to evaluate the function of ipRGCs in populations with a high prevalence of myopia.

46. The Potentially Blinding Spit

Authors : Loh Sue Anne, Sharmini N, Nurhayati AK, Chiang WS
Institution : Duchess of Kent Hospital Sandakan

Objective: To report a series of snake venom ophthalmia (SVO) cases in Sandakan.

Method: Case series.

Result: 5 cases of SVO by black spitting cobra (Naja Sumatrana) were recorded in the monsoon period of November-December 2017. Most of them experienced bilateral watery red eyes, pain, and blurring of vision with CF as the worst visual acuity documented. No systemic involvement was noted. Medical attention was sought instantly and immediate copious irrigation was done. Majority sustained epithelial defects while 1 patient had diffuse punctuate epithelial erosions. All was treated with ample lubricants, antibiotic, mydriatic and antihistamine. Antivenom usage was not required in all cases. Visual outcomes were able to revert back to their initial visual acuity at best and 6/6 was the best visual acuity recorded.

Conclusion: Cobra spit venom contains neurotoxic with mixture of cytotoxins, cardiotoxins and high phospholipases activities which can cause local necrosis and systemic absorption of venom. Direct venom inoculation into the eye with prolonged contact could impose fatality to sight when there is lack of treatment. Prompt and appropriate management of SVO should be delivered to save life and sight plus preventing undesirable outcomes.

47. A Thief Stealing Vision

Authors : Natashini A/P Rajaratnam, Gaayathiri Nadarajah,
Fazilawati Qamarrudin
Institution : Hospital Tengku Ampuan Rahimah

Objective: To report a case of rhino-orbital mucormycosis with central retinal artery occlusion (CRAO).

Method: Case Report.

Result: Orbital involvement in sinusitis is a well recognized entity(1). Infection from the sinuses can easily spread to the orbit, either by direct extension through the bone or indirectly through valveless venous plexus surrounding the orbit and the sinuses resulting in blindness(2). Mucormycosis is a rapidly progressive and often fatal opportunistic fungal infection predominantly affecting individuals with underlying metabolic or immunological

compromise(3). We present a case of acute fungal sinusitis that was complicated with irreversible visual loss.

Case report:
A 47 year old poorly controlled diabetic patient presented with right eye chemosis,proptosis and complete ptosis for two days.He had a fixed right pupil with no perception of light.
Fundoscopic examination showed a pale optic disc and retina with a cherry red spot macula. Left eye vision was 20/20 and fundus examination was normal. Nasal examination showed blackish deposits over the right middle meatus.
Full blood count revealed leukocytosis (27000cells uL) while Computed Tomography(CT) Scan showed increased soft tissue density in the sinuses with normal cavernous sinuses.
Based on clinical and imaging studies,a diagnosis of acute invasive mucormycosis with right orbital cellulitis and CRAO was made.
The patient was treated with a combination of endoscopic surgical debridement and systemic amphotericin B,however he succumbed to his illness .

Conclusion: Because of its rapid progression and high mortality the overall survival rate of patients with mucormycosis is approximately 50%, although survival rates of up to 85% have been reported more recently. (4)

48. Bilateral Simultaneous Central Retinal Vein Occlusion (CRVO) Secondary to Hyperviscosity in Multiple Myeloma

Authors : Natashini A/P Rajaratnam, Rafidah Sudarno, Fazilawati Qamarrudin
Institution : Hospital Tengku Ampuan Rahimah

Objective: To report a case of bilateral CRVO secondary to hyperviscosity in a multiple myeloma patient.

Method: Case Report

Result: Central retinal veins are particularly susceptible to occlusion or thrombosis in hyperviscosity states and conditions such as multiple myeloma have been associated with CRVO (1)
CRVO is a common cause of sudden loss of vision(2).In the CVO study (August 1988 to July 1992) a total of 725 eyes were enrolled; only three cases were bilateral (0.41%).(3)
Bilateral CRVO involvement has rarely been reported in multiple myeloma .(4)

Case Report
A 50 years old diabetic mellitus lady diagnosed with relapse multiple myeloma presented with two weeks history of bilateral progressive,painless visual loss.Visual acuity was hand movement and counting finger for the right and left eye respectively.
Anterior segments and intraocular pressures of bilateral eyes were normal.Fundus examination showed clear media, prominent dilatation and tortuosity of the central retinal veins, extensive four quadrant intraretinal hemorrhages and gross macula edema.
She was referred to Medical Retina team where a Fundus Flourescein Angiogram showed blocked venous fluorescence from the retinal hemorrhages, extensive areas of capillary non-perfusion, and vessel wall staining.The treatment given were PanRetinal Photocoagulation and intravitreal Anti-VEGF in view of ischemic CRVO.

Conclusion: CRVO is one of the major causes of severe vision impairment and blindness. (5) This uncommon clinical entity which typically has poor visual outcomes may be prevented with proper awareness. Close communication between treating ophthalmologist and hematologist is critical in effective management.

49. The Waiting Game - An Atypical Presentation of Retinoblastoma

Authors : Siti Husna Hussein, Safinaz Mohd Khialdin, Wan Haslina Wan Abdul Halim, Jamalia Rahmat
Institution : University Kebangsaan Malaysia Medical Centre (Ukmmc)

Objective: To report an atypical presentation of retinoblastoma

Method: Case report

Result: A healthy 3-year-old girl presented with right eye vitreous haemorrhage of unknown cause. B scan examination showed dense vitreous opacity without evidence of mass. Diagnostic vitrectomy was performed and noted thickened abnormal retina intraoperatively which is suspicious for retinoblastoma. MRI Brain/Orbit was inconclusive without any definite mass. The parents were counselled for enucleation and diagnostic histopathological examination however they opted for conservative management.. Throughout the follow up, there was total hyphema of right eye which obscure the fundal view. B scan however did not show any intraocular mass. Repeated MRI Brain/Orbit showed a lesion involving proximal optic nerve highly suggestive of retinoblastoma with meningeal enhancement. The parents were counselled again for enucleation with chemoreduction therapy however not keen and they defaulted. 2 months later, they brought the patient back with proptosis and disorganised right eye. They eventually agreed for intervention. The patient successfully underwent 3 cycles of chemotherapy prior to enucleation. After enucleation, she was planned for another 6 cycles of chemotherapy and radiotherapy subsequently.

Conclusion: This case illustrates vitreous haemorrhage as one of the atypical presentations of retinoblastoma. As treating ophthalmologists, a high degree of clinical suspicion supported by the usage of imaging modalities is necessary for diagnosis. Counselling of parents to consent for prompt treatment in cases of suspected retinoblastoma is of utmost importance. As atypical presentations of retinoblastoma are usually associated with advanced disease.

50. Transient Central Retinal Artery Occlusion Following Transfemoral Cerebral Angiography

Authors : Wendy Ong Chin Feng, Teh Wee Min, Prof Wan Hazabbah Wan Hitam, Dato' Haslina binti Mohd Ali
Institution : Hospital Sultanah Bahiyah, University Sains Malaysia

Objective: To report a rare case of transient central retinal artery occlusion (CRAO) following transfemoral cerebral angiography.

Method: Case report.

Result: A 47-year-old lady with underlying hypertension and dyslipidemia was diagnosed to have left middle cerebral artery aneurysm. Computed tomography (CT) angiography of cerebral artery revealed a saccular aneurysm measuring 7.6mm x 8.2mm x 8.6mm. She underwent left craniotomy and aneurysm clipping which were uneventful. Repeated postoperative CT brain showed no more aneurysmal collection. A follow-up transfemoral cerebral angiogram was performed 7 months later. During the procedure, she experienced a sudden onset of left eye painless visual loss and was immediately referred to the eye team after that. Left eye vision was finger counting with no relative afferent pupillary defect. Anterior segment was normal. Intraocular pressure was 14 mmHg. Fundus showed pale macula with patchy hypopigmented areas with no macular oedema. No box-carring of vessels or intravascular emboli was detected. OCT macula showed subtle thickening of the inner retinal layers. Fundus fluorescein angiography performed about 2 hours after initial symptoms showed no significant delay in filling of the retinal vasculature. Transient CRAO likely secondary to vasospasm was made. Rebreathing into a paper bag, ocular massage and IOP-lowering medications were initiated. Left eye vision improved to 6/9 within 3 hours after initial onset of symptoms.

Conclusion: It is crucial to highlight the risk of CRAO in patients undergoing cerebral angiography and to be alert of its symptoms. Prompt referral and management may avert a potentially blinding outcome.

51. Partial 3rd Cranial Nerve Palsy in Herpes Zoster Ophthalmicus

Authors : Prakash Supahiah, M .Yusof, Anita, Goh Siew Yuen
Institution : Hospital Segamat

Objective: To report a case of partial 3rd cranial nerve palsy in Herpes Zoster Ophthalmicus.

Method: Case Report.

Result: A 38 year old lady with poorly controlled diabetic presented as droopy of her left upper lid.She was well on early September 2017 until she developed a painful vesicular rash with blister formation surrounding her left forehead and scalp. She claimed her eye was becoming droopy gradually after 2 days of rash. On examination, she had a dry vesicular rash over the left sided forehead and scalp. She had restricted eye movement in all direction of gaze except abduction, partial ptosis and mid dilated pupil. Her best corrected vision acuity for both eyes was 6/9.The pupils measured 3mm OD and 4mm OS .There was no relative afferent pupillary defect. Slit lamp examination revealed cells anterior chamber, cell 3+.There was no keratic precipitate or iris nodule. Fundus examination showed cotton wool spots inferior to fundus, no retinitis or vasculitis seen .Her other neurological and systemic examination were unremarkable .Immunological and viral screening taken was negative . CT brain paranasal negative. She was commenced on oral acyclovir 800mg for five times per day, topical dexamethasone and topical atropine. On follow up to 2 months, she had regained of her full eye movement and ptosis is improved.

Conclusion: Ophthalmoplegia is a rare complication of HZO.It is crucial to optimize the systemic comorbidities to hasten the recovery. Oral antiviral therapy and topical usually results in a self-limiting ophthalmoplegia that improves on its own over several months.

52. Chronic Uveitis Post Cataract Surgery in Pusat Pembedahan Katarak Majlis Agama Islam Wilayah Persekutuan (MAIWP) - Hospital Selayang (PPKM-HS): A Case Series

Authors : Seow Sieng Teng, Loh Chern Lin, Rozila Ariff
Institution : Hospital Selayang

Objective: To report cases with chronic uveitis post cataract surgery in PPKM-HS.

Method: Case 1: Mr NA, 48 years old Malay man diagnosed with left white cataract underwent left phacoemulsification with monofocal intraocular lens (IOL) implantation on April 24th , 2017.

Case 2: Mr TH, 76 years old Malay man with pseudoexfoliation syndrome and posterior staphyloma underwent right phacoemulsification with monofocal IOL implantation on November 2th , 2016.

On follow up post-op examination, both patients' visions were not significantly improved. Pre-op vision were Hand Movement in both patients. Post-op vision showed Counting Fingers in both patients. Both patients noted to have cells in anterior chambers after six weeks post-operative days despite on regular eye drops.

Result: Case 1: Day 6th post operatively, noted left cornea haziness, severe inflammation and high intra-ocular pressure (IOP) 48mmHg. Noted residual cortical matter superiorly subincisional wound. Funduscopy showed swollen optic swollen with peripapillary retinitis and sphincter hemorrhage.

Case 2: Day 6th post-operatively, noted right cornea haziness with descemet folds, severe inflammation and guttata (Fuchs endothelial dystrophy). Noted residual cortical matter at 6 o'clock. Eight months post-operative, patient underwent Descemet Stripping Automated Endothelial Keratoplasty (DSAEK) in Hospital Sungai Buloh.

Conclusion: Chronic uveitis post cataract surgery in cases mentioned above were induced by residual cortical matter which resolved with long term eye drops. It is very vital to do a proper cortical matter clean up intra-operatively.

53. Conjunctival & Corneal Intrapepithelial Neoplasia - Comparitve Case Review of Outcome Using Topical Mitomycin-C Post Surgical Intervention

Authors : Valarmathy Vaiyavari, Chandramalar S
Institution : University Malaya

Objective: To report outcome of Mitomycin-C (MMC) treatment following wide excision, cryotherapy, conjunctival reconstruction with or without AMT in patients with conjunctival and corneal intraepithelial neoplasia (CCIN).

Method: Case series and literature review.

Result: Unilateral suspicious gelatinous conjunctival growth in four patients with duration of presentation ranged from 1-3 month was examined. Three patients demonstrated conjunctival lesion extension into the cornea, and in the fourth patient, lesion limited to

limbus. All underwent wide excision and cryotherapy followed by AMT in 2 patients with direct closure in the remaining 2 patients. Post-surgically the operated eyes were treated with topical antibiotics and steroids. Histopathology confirmed mild to moderate conjunctival intraepithelial neoplasia (CIN) in all four cases thus topical chemotherapy was initiated with weekly on-off cycles of Gutt MMC 0.02 % 6 hourly. Number of cycles varied from 3-4 depending on patient tolerance and side effects. All responded well but one patient developed a similar suspicious lesion in the contralateral eye.

Conclusion: Wide excision, cryotherapy by double free thaw technique followed by conjunctival reconstruction by AMT or direct closure remains a primary treatment option in CCIN. Adjuvant therapy with 0.02% MMC is shown to be effective for prevention of CCIN recurrence but requires close monitoring for side effects.

54. Iatrogenic Intrastromal Trypan Blue Injection Injury in Cataract Surgery

Authors : Nor Hasnida AB Gani, A Nurfahmi AA, Khairidzan MK
Institution : Hospital Tengku Ampuan Afzan Kuantan Pahang

Objective: To report the clinical appearance and management of iatrogenic intrastromal vision blue (0.1%) injection during cataract operation.

Method: Case series.

Result: We report two cases of iatrogenic intrastromal trypan blue injection during cataract operation, both operations were scheduled to be performed by the two different ophthalmology residents. Both patients had complicated with iatrogenic intrastromal vision blue injection while surgeons attempted to stained the capsule. Cataract procedures were abandoned due to instant generalized cornea haziness development. The injury affect the whole corneal thickness and extended from limbal to limbal. Apart from deteriorated vision, patients were asymptomatic.There were only minimal anterior chamber reaction and intraocular pressure were normal. Intensive topical corticosteroid, prophylactic antibiotic, gutt hypertonic saline 5% and mydriatic agent eyedrops were administered. The cornea haziness in both patients were completely resolved by 6 weeks, and had uneventful phacoemulsification after 3 months of the incident. Post operation vision were 6/9.

Conclusion: Though iatrogenic intrastromal vision blue injection resulted in significant acute corneal injury, the prognosis remains good.. Decision to abundant the surgery and prompt management to reverse the complication before planned for subsequent surgery had an excellent outcome.
Keywords: Intrastromal injury, trypan blue, cataract extraction complications, anterior capsule staining.

55. Seronegative Occular Toxoplasmosis in Immunocompetent Patient

Authors : Mohd Khairul Bin Abd Majid,
Safinaz Mohd Khialdin MD (UKM), M.S Oftal (UKM)
Institution : Pusat Perubatan UKM

Objective: To report a case of ocular toxoplasmosis with negative serology in an immunocompetent patient.

Method: Case report.

Result: 58-year-old Indian woman, presented with left eye blurring of vision for 2 weeks after 1 month preceding history of community acquired pneumonia. She was initially treated with topical antibiotics and a short course of oral prednisolone at a private center which was self-discontinued and symptoms got worse after 5 days. Her presenting visual acuity was 6/9 OD and CF OS. RAPD was negative. Examination of left eye revealed mild degree of anterior vitreous cells with vitritis with an area of retino-choroiditis superior to foveola. However there is no adjacent chorioretinal scar. Full blood count showed leucocytosis with lymphocytes predominant. Her others infective screening as well as toxoplasma serology of IgG and IgM were negative. Serology of tuberculosis quantiferon was positive however it is not conclusive.
Despite not having an adjacent retino-choroiditis scar, she was empirically treated as ocular toxoplasmosis with oral azithromycin 500mg daily for 6 weeks with anti-inflammatory dose of oral prednisolone . Her left eye vision has markedly improved with best visual acuity of 6/12 ph 6/9 OS at 3 months follow up with complete resolution of the retinal lesion.

Conclusion: It is crucial to have high degree of suspicion in establishing the diagnosis of ocular toxoplasmosis so that early targeted anti-toxoplasma therapy can be initiated thus preventing the ocular morbidity. Serological test may help to confirm the diagnosis of atypical cases but one should not be misled if result is negative.

56. Delayed Visual Impairment Due to Optic Chiasm Herniation Into Pituitary Sella Post Transphenoidal Resection: A Rare Case Entity

Authors : Mohd Khairul Bin Abd Majid,
Safinaz Mohd Khialdin MD (UKM), M.S Oftal (UKM)
Institution : Pusat Perubatan UKM

Objective: To report a case of delayed visual impairment due to optic chiasm herniation into pituitary sella post transphenoidal hypophysectomy.

Method: Case report.

Result: 56-year-old lady had undergone a transphenoidal hypophysectomy followed by radiotherapy in 1995 for an underlying pituitary tumour. Post-surgery she had no visual impairment. However, 18 years later she developed gradual onset of painless blurring of vision in the right eye. Confrontation test revealed unilateral right infero-nasal quadrantonopia which was confirmed by Humphrey visual field. Ocular examination of the right eye showed VA 6/18 ph 6/18, RAPD was positive with non-glaucomatous pale optic disc. MRI of brain showed herniation of right optic chiasm with inferior frontal lobe into pituitary sella. Neurosurgical team has decided for conservative management. On further follow up with serial Humphrey visual field assessment, her vision remained stable for the past 4 years with no worsening visual acuity or visual field defect.

Conclusion: Long term follow up is essential for monitoring of vision following removal of a pituitary tumour. Optic chiasm herniation may be considered as a differential diagnosis after ruling out tumour recurrence in the presence of any visual deterioration.

57. Neuroretinitis as an Unsusual Manifestation of Leptospirosis

Authors : Anis Baidura Binti Azal, Asc Prof Norshamsiah Md Din, Raja Nor Farahiyah Raja Othman
Institution : University Kebangsaan Malaysia Medical Centre (UKMMC)

Objective: To report a case of neuroretinitis secondary to leptospirosis.

Method: Case report.

Result: A 46-year-old lady with uncontrolled diabetes presented with left eye (LE) blurring of vision for one week. It was painless, slowly progressive and mainly involves the nasal field. There was no history of recent travelling/jungle trekking or swimming. There was no fever or flu-like symptoms but she had a history of cat scratch a few weeks before.
Ocular examination revealed visual acuity of 6/18 in the right eye (RE) and 4/60 in the LE with left positive relative afferent pupillary defect. Fundus examination revealed optic disc swelling with disc haemorrhage. LE more severe than RE, vasculitis in the RE and an incomplete macula star in the LE. There was no retinitis or choroiditis. Haematological investigations shows mild leucocytosis with high ESR. Mantoux test, chest x-ray, CT brain and orbits were unremarkable. The patient was empirically treated for cat scratch disease with oral doxycyclin while waiting for other infectious serological tests. Oral prednisolone was started a week later as the vision was really poor with disc swelling. Serological report came back as leptospira IgM positive. The patient's vision improved to 6/9 right eye, 6/12 left eye after 4 weeks follow up with mild resolution of disc edema and macula star.

Conclusion: Ocular manifestation of leptospirosis remains underdiagnosed mainly because of prolonged symptom free period separating the systemic from ocular manifestation. Neuroretinitis like in our case is an uncommon manifestation. However, visual response was satisfactory due to prompt diagnosis and definitive therapy.

58. Infectious Endophthalmitis: A Retrospective Study at PPUKM

Authors : Saraswathy Ramasamy, Mushawiati Mustapha MS Ophthal
Institution : UKM Medical Centre

Objective: To report cases of endophthalmitis in PPUKM.

Method: All cases of endophthalmitis treated between 2013 - 2017 were reviewed retrospectively. The clinical characteristics, etiology, microbiological spectrum, previous ocular trauma or surgery and management, as well as complications were analysed.

Result: A total of 23 cases were identified: 19 cases (82.6%) were exogenous endophthalmitis and 4 cases (17.4%) were endogenous endophthalmitis. Endophthalmitis developed after intraocular surgery such as cataract surgery and trabeculectomy was noted in 10 patients (41.7%).8 cases (34.8%) developed as extension of corneal ulcer, in which 2 patients had history of penetrating keratoplasty for corneal ulcer 1 year prior of presentation. Our data also revealed that 1 case (4.3%) developed after ocular trauma and 4 (17.4%) cases of endogenous endophthalmitis evidenced by ocular findings and blood culture.
Bacteria were isolated in 14 (60.9%) cases and fungal was noted in one case(4.3%).The common causative bacterium was Pseudomonas aeruginosa and Enterobacter sp.Combined

vitrectomy and intraocular antibiotics were performed in 4 cases (17.2%), whereas 19 cases (82.6%) were treated with intraocular antibiotics alone. 4 patients underwent evisceration due to failure of treatment.

Conclusion: Endophthalmitis is a medical emergency and most feared complication of intraocular surgery and trauma. Intravitreal antibiotic remains the gold standard for endophthalmitis and early vitrectomy in cases that have failed to respond initial intravitreal injection may improve visual outcome. Systemic antibiotics are necessary to treat endogenous endophthalmitis and as adjunct therapy for fungal endophthalmitis.

59. A Rare Case of Spontaneous Cornea Intrastromal Haemorrhage with Evidence of Clearing without Surgical Intervention

Authors : Bee See Yee MD (UKM), Chen Chui Yain M.Med, Ng Sok Lin M.Med
Institution : Hospital Taiping

Objective: To report a rare case of spontaneous cornea intrastromal haemorrhage with evidence of clearing without surgical intervention.

Method: Case report

Result: A 54- year- old Malay lady who presented with sudden vision loss in the left eye and a dense intracorneal haemorrhage measuring 7mm x 7mm involving visual axis and obscuring pupil. There were ghost vessels seen in the cornea inferiorly. Systemic evaluation for autoimmune diseases and causes of interstitial keratitis were negative. Very slow clearing of the intracorneal haemorrhage was observed for the past one year. There was improvement in vision with residual 2 islands of intracorneal blood. Pupil was visualized but a layer of haemosiderin stain in the stromal persisted. Patient is awaiting for penetrating keratoplasty.

Conclusion: Intracorneal haemorrhage can occur due to ruptured or reopened ghost vessels leading to impaired vision. Spontaneous resolution is seen in most cases but keratoplasty may be needed in unresolved cases.

Key words: Intracorneal haemorrhage

60. Rare Presentation of Ocular Tuberculosis (TB) in an Immunocompetent Patient

Authors : Nur Shahirah Binti Amir Hamzah, Safinaz Mohd Khialdin, Prof Mae-Lynn Catherine Bastion
Institution : UKMMC

Objective: To report an anterior segment mass diagnosed as presumed intraocular TB in an immunocompetent patient.

Method: Retrospective case report.

Result: A 30-year-old male with history of recurrent right eye (RE) blurring of vision for 2 months' duration associated with eye pain, redness and photophobia had RE visual acuity

(VA) of hand motions. Left VA was 6/6. RE examination revealed mild injected conjunctiva with anterior chamber reaction of 3+, keratic precipitates, entropion uvea with seclusio pupillae, rubeosis iridis and white cataract. Gonioscopy revealed vascularised white mass inferonasally. RE intraocular pressure was 12 mmHg. B-scan showed retrolental mass. MRI brain and orbit showed a corresponding focal enhancement.
Tuberculin test was 24 mm with induration. Erythrocyte sedimentation rate and C-reactive protein was raised. Chest X ray was normal. Retroviral, syphilis, Hepatitis B and C screening were negative. Full blood count was normal. He was treated as RE chronic uveitis secondary to presumed ocular TB. Anti-TB was started with topical steroids. His AC reaction became quiet after 2 months' of treatment and vascularised lesion improving.
His vision improved to 6/15 after he underwent cataract extraction and completed 9 months of anti-TB.

Conclusion: TB most commonly affects the lungs, but has many extrapulmonary manifestations including intraocular. TB can simulate an ocular tumour even in immunocompetent individuals.

61. Vitreoretinal Intervention of Submacular Haemorrhage: Experience at Department of Ophthalmology, Hospital Selayang

Authors : Yeoh Seng Hong, Norlelawati Zainol, Zabri Kamarudin
Institution : Hospital Selayang

Objective: To evaluate the clinical outcomes of PPV with subretinal recombinant Tissue Plasminogen activator (rTPA) for managing submacular haemorrhage (SMH).

Method: This is a retrospective case series study of 16 eyes of 16 patients in Hospital Selayang, Malaysia who had PPV with subretinal rtpa with or without gas tamponade. Major outcome parameters are visual acuities (VA), displacement of submacular haemorrhage and post-operative complications over one month, third month and sixth month post operatively.

Result: Polypoidal choroidal vasculopathy (PCV) (n=11) is the main aetiology of SMH in this study. Submacular bleed reported good displacement in 81.3% of (n=13) cases and moderate displacement (n=2) in 12.5 % cases. All cases but 5 [post-operative vitreous haemorrhage (n=2), Subretinal fibrosis (n=1), history of breakthrough vitreous haemorrhage (n=1), defaulted follow-up (n=1)] experienced improvement in VA post-operative 1/12. The mean VA improved from 2.17 ± 1.02 logMAR at presentation to 1.33±0.88 at one month, 1.15 ± 0.73 at third month and 1.08±0.77 sixth month post operatively. Complications included 1 eye breakthrough VH, 1 eye 8 ball hypaema, 2 eyes PED with SRF.

Conclusion: PPV with subretinal rtpa with or without gas tamponade may improve patients' visual acuity and enable accelerated detection of underlying aetiologies by allowing clinical examination and meaningful angiogram.

62. Juvenile Open-Angle Glaucoma (JOAG): Silent Killer of Childhood Vision

Authors : Chin-Sern Chan, Kang-Kok Ng, Nor Fadzillah Abd Jalil, Raja Norliza Raja Omar
Institution : Melaka Hospital

Objective: To report a case of Juvenile open-angle glaucoma (JOAG) and the long-term effect of trabeculectomy.

Method: Case report.

Result: A twenty year-old woman presented with progressive left eye peripheral vision loss for 1 year, associated with left sided headache. Visual acuity was 6/9 for both eyes (OU). Examination showed left eye (OS) relative pupillary afferent defect with reduce peripheral vision of on confrontation test. Anterior segment examination for both eyes was normal. Intraocular pressure (IOP) for the right eye (OD) was 32 mmHg and the OS was 50 mmHg. Both eyes angle were open on gonioscopic examination. On fundus examination, there was asymmetrical cup-disc ratio (CDR) on both eyes (0.3 on OD and 0.9 on OS). Visual field test revealed tunnel vision on OS. Diagnosis of bilateral juvenile open-angle glaucoma was made and she was treated medically to lower IOP OU and subsequently underwent bilateral trabeculectomy with mitomycin C (MMC). Ten months after the surgery, both eyes IOP were well controlled without any antiglaucoma medication. There was no clinical evidence of worsening of glaucomatous optic neuropathy.

Conclusion: JOAG often presents with advanced optic neuropathy. Surgical intervention is usually the first-line treatment , which is different from adult primary open-angle glaucoma (POAG), in view of long-term IOP control and life expectancy of the patient.

63. Completion of Written Informed Consent for Eye Surgery in Main Operating Theater, University of Malaya Medical Centre

Authors : Ee Chye Li, Associate Prof Amir Bin Samsudin
Institution : University Of Malaya

Objective: To assess the completeness of written informed consent forms for patients undergoing eye surgery in the main operating theater at the University of Malaya Medical Centre (UMMC).

Method: Retrospective data analysis on all patients who underwent eye surgery from May 2017 to July 2017 at UMMC. Data was collected from Ipesakit, an online system which contains patients' medical data. Standards were taken from the Malaysian Medical Council (MMC) guidelines.

Result: 165 informed consent forms were analysed. Some were lacking in demographic data such as identification number (2.4%) and address (0.6%). One form did not have surgical risks and benefits documented. On half of the forms (51.5%) were there stated the language used to communicate with the patients or next-of-kins, which was predominantly in Malay followed by in English. No interpreter was required in 62.4%, while 34.6% did not specify any presence of an interpreter. All the consent forms were signed by patients, clinicians and witnesses; however, the dates for each were only written in 93.9%, 94.5%, and 98.2% respectively. Clinicians' names were not written in 7.9% of cases. The average duration from the time the consent was taken to the actual procedure was 1.5 days. Consents were obtained from legal guardians in 14.0% of cases, mainly patients' mothers.

Conclusion: Completion of written informed consent forms are not yet achieved in comparison to MMC standards. Written informed consent should be obtained completely

prior to any intervention in order to reduce indemnity risk, maintain high standards of patient care, and ensure compliance with national guidelines.

64. Ankylosing Spondylitis Presenting as Unilateral Acute Angle Closure Glaucoma

Authors : Ee Chye Li, Associate Prof Amir Bin Samsudin,
Associate Prof Tengku Ain Fathlun Binti Tengku Kamalden,
Associate Prof Norlina Binti Mohd Ramli
Institution : University Of Malaya

Objective: To report a case of unilateral acute angle closure glaucoma as an initial presentation of Ankylosing Spondylitis (AS).

Method: Case report.

Result: A 46-year old Chinese man presented with right eye redness, pain and poor vision for a week. Vision was counting fingers with a positive relative afferent pupillary defect. His conjunctiva was congested with an oedematous cornea. The anterior chamber was very shallow with the presence of fibrin and seclusio pupillae causing iris bombé. Intraocular pressure (IOP) was 52 mmHg. Ocular examination of the fellow eye was normal with open angles.
Systemic examination revealed limitation of the neck and spinal movement. Based on positive family history for AS and clinical findings, the working diagnosis was right acute angle closure glaucoma secondary to AS. The diagnosis of AS was confirmed by typical `bamboo spine' appearance on X ray and a positive HLA-B27 test.
We started him on intensive topical steroids, 3 topical antiglaucomas and oral glycerine. He also required paracentesis and intravenous mannitol infusion to achieve adequate corneal clarity for laser peripheral iridotomy. Subsequently, his IOP normalised and was well controlled thereafter. The corneal oedema and anterior chamber inflammation completely resolved with vision improving to 6/6. He was also co-managed by the rheumatologists with further plans for biologic drugs.

Conclusion: Acute anterior uveitis is the most common extra-articular manifestation of patients with AS but an initial presentation with acute angle closure glaucoma is rarely seen.

65. A Case of Ophthalmomyiasis

Authors : Ng Yu Siang, Teo Yen E, Muhammad Waqas
Institution : Hospital Keningau

Objective: To present a rare case of left ophthalmomyiasis.

Method: Case report.

Result: A 61-year-old lady with underlying schizophrenia, was found missing from home and was later discovered by police 3 days later, lying unconscious in the jungle with her face down on the mud. She alleged scratched her left eye sustained left eyelid laceration wound infested with maggots 5 days later. Her visual acuity was unable to be assessed as patient was uncooperative. There were deep laceration wounds and scratch marks at the left upper

and lower eyelids involving the lower canaliculus. There were multiple punctums in the wound housing living maggots. Her left cornea was hazy, anterior chamber formed. The right eye was normal. Paraffin was used to seal the punctums to force the maggots to migrate to the surface. A total of 137 maggots were removed manually by forceps over the course of 4 days in ward. Unfortunately the remaining maggots eventually penetrated into the left eyeball through the cornea at day 4. Left eye examination under anaesthesia, left evisceration and left eyelids reconstruction were done after MRI assessment. She developed right eye sympathetic ophthalmia after left globe perforation but was resolved after a course of tapering oral steroid.

Conclusion: Ophthalmomyiasis progresses rapidly and can completely destroy orbital tissues within days. Treatment consists of rapid removal of larvae and surgical debridement.

66. Visual Outcome Post Refractive Surgery with Cataract in Pusat Pembedahan Katarak Majlis Agama Islam Wilayah Persekutuan (MAIWP) - Hospital Selayang (PPKM-HS)

Authors : Nuratiqah Binti Zainal Abidin MD, Rozila Binti Ariff
Institution : Hospital Selayang

Objective: To report visual outcome post refractive surgery with cataract in Pusat Pembedahan Katarak Majlis Agama Islam Wilayah Persekutuan (MAIWP) - Hospital Selayang (PPKM-HS).

Introduction:
We reported two cases post refractive surgery with cataract in PPKM-HS. Biometry pre and post refractive surgery were obtained. IOL Calculator for Eyes With Prior Myopic LASIK/ PRK software was used. We chose a negative spherical aberration intraocular lens (IOL).

Method:
Case 1:
Mr. M, 63 years old Indian man had bilateral Photorefrcative Keratectomy (PRK) in 1993 at private centre. He presented to us with bilateral senile cataract and right best corrected visual acuity (BCVA) was 6/18. He underwent right phacoemulsification with monofocal IOL Implantation (PEA + PCIOL) on January 4th, 2018.

Case 2:
Mr. C, 62 years old Chinese man had bilateral Radial Keratectomy (RK) in 1997 at private centre. He presented to us with right pseudophakic and left cortical cataract. His right BCVA was 6/6 and left BCVA was 6/12. Patient requested for left cataract surgery and underwent left PEA + PCIOL on September 14th, 2017.

Uneventful surgeries performed. Post operative refraction at 6 weeks were recorded.

Result:
Case 1:
Right refraction post PRK was -0.50/-1.50x70: 6/18. Right BCVA post PEA + PCIOL was 6/9.

Case 2:
Left refraction post RK was +2.00/-0.75x80: 6/12. Left BCVA post PEA + PCIOL was 6/9.

Conclusion: The above cases demonstrated successful surgeries with good visual outcomes obtained after proper biometry assessment, accurate IOL calculation and correct choice of IOL. A negative spherical aberration IOL gives the best result.

67. Profile of Microbial Keratitis in East Coast Malaysia: A Retrospective Review

Authors : Reena Khaira (MD), Sangeetha Tharmathurai (MBBS MMED)
Institution : Hospital Sultan Haji Ahmad Shah Temerloh

Objective: Our objective is to determine the epidemiological characteristics, risk factors, microbiological profile, visual prognosis and potential complications of microbial keratitis.

Method: All patients with microbial keratitis admitted to Hospital Sultan Haji Ahmad Shah Temerloh over a 4 year period from January 2013 to December 2016 were analyzed retrospectively. The data analyzed include demographic data, microbiological results, risk factors, pre and post treatment visual acuity and potential complications.

Result: Males (83%) were affected more than females. Majority of patients were between 41-50 years (23%). The most common predisposing factor was ocular trauma (78%). Fifty six (56%) cases were positive for cultures; of which 51.8% (29) were bacterial and rest were fungal isolates. Pseudomonas spp. (37%) was the most common bacterial isolate and Fusarium spp. (28.6%) was the most common fungal isolate. Post treatment, 63% of patients attained a visual acuity of 6/6 - 6/24. The commonest complication was corneal perforation, 41.7% (10).

Conclusion: Microbial keratitis was seen predominantly in males aged between 41 to 50 years old, with Pseudomonas spp. being the main aetiological organism. The visual outcome of most patients improved with treatment and was dependent on the presenting visual outcome.

68. Bilateral Simultaneous Paediatric Rhegmatogenous Retinal Detachements: Clinical Characteristics and Outcomes

Authors : Andrew S.H. Tsai, Chee Wai Wong, Gavin Tan, Shu Yen Lee
Institution : Singapore National Eye Centre

Objective: To describe the clinical characteristics and surgical outcomes of bilateral pediatric rhegmatogenous retinal detachments (RRD).

Method: Retrospective review of 40 eyes of 20 pediatric patients (18 years old and under) with bilateral RRD treated at Singapore National Eye Centre with scleral buckling(SB), pars plana vitrectomy(PPV) or combination of scleral buckle with pars plana vitrectomy (SB+PPV). Baseline clinical characteristics were collected and surgical outcomes determined at 6 months after surgery.

Result: The mean age was 13.8 (range 5 to 18 years old) and the majority were male (85%). The most common pathologies were lattice with multiple breaks (20%), single U tears (17.5%) and multiple round holes (12.5%). 29 (72.5%) eyes had macula off retinal detachments at presentation. The mean preoperative visual acuity (VA) in the SB, PPV and SB+PPV groups

were 0.80±0.88, 2.73±0.05 and 2.27±0.81 respectively. (p<0.001). Single operation success was 70% and final anatomical success was 82.5% with a mean of 1.45±1.09 surgeries. 55% of eyes had final visual acuity (VA) of 6/12 or better. The mean final VA in the SB, PPV and SB+PPV groups were 0.44±0.39, 1.35±1.13 and 0.88±0.77 respectively. (p=0.007) Factors associated with final VA of 6/12 or better includes increasing age [OR=1.32, 95%CI(1.01, 1.70)] and macula on status [OR=11.4, 95%CI(1.06, 125)].

Conclusion: Bilateral pediatric RRD can have good anatomical and visual outcomes if managed expediently. The older child has a better visual prognosis, and macula on pediatric RRDs are highly associated with a good visual outcome.

69. Ocular Lymphoma Mimicking Cytomegalovirus (CMV) Retinitis

Authors : Mohd Feendi Bin Mohd Fauzi Yap, Prof Norshamsiah Md Din, Rona Asnida Nasaruddin
Institution : Hospital Universiti Kebangsaan Malaysia

Objective: To report an atypical presentation of ocular lymphoma.

Method: Case report.

Result: A 45-year-old man with underlying diffuse B-cell lymphoma and completed 6 cycle of chemotherapy presented with painless blurring of vision OD for 2 weeks associated with floaters. Visual acuity (VA) was PL OD, and 6/9 OS. Ocular examination showed fine keratic precipitates, anterior chamber cells 1+, localized vitritis, normal macula, and no disc swelling OU. The vitreous tap was negative for malignant cells and PCR for TB and CMV. CT brain/orbit was normal. Oral prednisolone was given in an attempt to improve his vision.

However, a month later his vision worsened (NPL OD and PL OS). The disc was swollen OD, hemorrhagic retinitis in all quadrants OD but only nasally OS, perivascular sheathing, choroiditis and venous beading. As patient refused vitreous biopsy, he was treated as presumed CMV retinitis after a repeated vitreous tap was negative.

His VA improved to 6/24 OS but both fundus showed worsening subretinal infiltrate with exudative retinal detachment. Diagnosis was revised to ocular TB after a 20 mm mantoux reading although vitreous tap was negative for TB, HSV and CMV.

Despite treatment, VA OS deteriorated to PL. He finally consented for a vitreous biopsy which showed atypical lymphoid cells highly suggestive for vitreoretinal lymphoma and subsequently received intravitreal methotrexate OU.

Conclusion: Diagnosing ocular lymphoma is challenging as it may show ambiguous features especially in early stages. Vitreous biopsy may yield better results in facilitating diagnosis.

70. Oculomotor Nerve Paralysis in Herpes Zoster Ophthalmicus

Authors : Logeswari Krishna, Noorlaila Baharuddin, Norfadzillah Abdul Jalil, Raja Norliza Raja Omar
Institution : Hospital Melaka

Objective: To report two rare sequelae of Herpes Zoster Ophthalmicus (HZO).

Method: Case report.

Result: Herpes Zoster Ophthalmicus is responsible for a variety of ocular conditions. Oculomotor nerve paralysis caused by herpes zoster is an uncommon clinical finding. We present two cases of HZO induced oculomotor nerve palsy. Case one, a 74 years old man presented with rashes over right side of the forehead extending to the nose and right eye redness for 4 days. There were presence of vesicular rashes over forehead, positive Hutchinson's sign, keratouveitis, partial ptosis with restricted elevation and adduction over the right eye with pupillary involvement. He was treated with oral Acyclovir, as well as topical antiviral, antibiotics and steroids. The keratouveitis and ptosis improved completely after three months. Case two, a 66 years old lady, presented with left upper eyelid swelling, left sided forehead rashes associated with eye redness for 5 days. There were presence of vesicular rashes over the forehead, negative Hutchinson's sign, left preseptal cellulitis with keratouveitis. She was treated with oral Acyclovir, as well as topical antiviral, antibiotics and steroids. Three weeks from initial presentation, patient developed left partial ptosis with restricted elevation over the left eye with pupillary involvement. Imaging done revealed no intracranial lesions. Three months later, ptosis completely resolved with normal extraocular muscle movements.

Conclusion: Oculomotor nerve palsy is a rare sequelae of HZO and its recovery were observed after three months from initial presentation.

71. Expect the Unexpected: Atypical Presentation of Ocular Toxoplasmosis

Authors : Kosyilya Arumugam MBBS (Manipal), Mushawiahti M.S (Ophth) UKM, Aida Zairani MZ M.S. (Ophth) UKM, Umi Kalthum MN M.S(Ophth) UKM
Institution : Hospital Universiti Kebangsaan Malaysia (HUKM)

Objective: To report a case of atypical ocular toxoplasmosis with four quadrant retinal vasculitis.

Method: Case report.

Result: A 39-year-old woman presented with right eye sudden floaters, redness and discomfort for 6 days associated with prodromal symptoms. Her vision was 6/9 with the presence of mild RAPD over right eye and 6/6 over the left eye. Her right conjunctiva was injected with moderate anterior chamber reaction. There was no keratic precipitates but there was presence of multiple iris nodules. Fundus examination of the right eye revealed vitritis and sheating of all major vessels in four quadrants of the retina. There was also a retinochoroiditic lesion with overlying vitritis inferotemporally. Her right optic disc was hyperemic, with normal macula. Angiography showed delayed arteriole and venous filling with leaking of the retino-choroidal lesion. All uveitic screening was normal except a mildly elevated ESR and positive IgG for toxoplasma. Patient was started on oral Bactrim 960mg twice a day for 6

weeks and topical steroids were eventually discontinued. Patient responded to treatment, her signs and symptoms improved on subsequent follow-ups.

Conclusion: Ocular toxoplasmosis typically presents with retinochoroiditis, retinochoroidal scar and intense vitreous inflammation. However, four quadrant vasculitis associated with retinochoroiditis in a young lady should highlight clinicians on possibility of atypical toxoplasmosis. Iris nodule may also be a presenting feature in such cases.

72. The Eye, An Immune Privilege Organ?: A Case of Bilateral Eye Scleritis and Vasculitis Indicating Systemic Lupus Erythematosus Flare

Authors : Kosyilya Arumugam MBBS (Manipal), Mushawiahti M.S (Ophth) UKM, Ruslinda M MMed UKM, Umi Kalthum MN M.S(Ophth) UKM
Institution : Hospital Universiti Kebangsaan Malaysia (HUKM)

Objective: To report a case of bilateral eye scleritis with retinal vasculitis in a young lady with established systemic lupus erythematous (SLE).

Method: Case report.

Result: A 31-year-old woman presented with bilateral eye redness and pain for one day. She has severe SLE mainly affecting skin, and was recently diagnosed with lupus nephritis, of which she was receiving weekly cyclophosphamide and very slow tapering of oral steroid. Her vision was 6/9 over right eye and 6/12 over left eye with no RAPD. Bilaterally her conjunctiva was chemosed and prolapsed beyond the lid margin, with minimal lid swelling. There were anterior chamber cells of 1+ bilaterally. On B-scan, there was scleral thickening in both eyes without T-sign. Fundus examination revealed torturous and corrugated vessels in the periphery. Angiography showed active vasculitis evidenced by leaking vessels. Her malar rash was also very prominent and she had proteinuria of 3+. Brain and orbit imaging negated infection. She was pulsed with daily intravenous methyrednisolone and subsequently had good resolution of ocular and skin symptoms. This case highlights a refractory SLE with progression into vasculitis and scleritis despite on strong second line immunosuppression.

Conclusion: Retinal vasculitis in SLE patients is an important hallmark of active disease. Lower threshold for suspicion of flare-up is mandatory, despite on board immunosuppression. Refractory SLE may still require pulse of intravenous steroid along with strong disease-modifying immunosuppressive agent. Co-management with physicians ensures a comprehensive and optimize care.

73. A Rare Case of Mooren's Ulcer Complicated with Hypopyon

Authors : Zayani Zohari, LM Tan, Jakiyah Daud, G. Intan
Institution : Sarawak General Hospital

Objective: To report a rare case of Mooren’s ulcer with hypopyon that responded well to treatment.

Method: Case report.

Result: A 61-year-old Chinese woman with hypertension presented with six months history of right eye pain, photophobia and loss of vision. Her visual acuity (VA) was hand movement (HM) in the right eye. Examination revealed a complete 360° peripheral circumferential corneal thinning
surrounding a central total epithelial defect and stromal oedema. Pigmented keratic precipitates, hypopyon and posterior synechiae were present with a raised intraocular pressure of 26mmHg. There was no scleritis or posterior segment involvement as evidenced by B scan ultrasonography. Examination of the left eye was normal with VA of 6/9. Bandage contact lens was applied and she was started on topical antibiotics, cycloplegics, intraocular pressure (IOP) lowering drugs and systemic nonsteroidal anti-inflammatory drugs (NSAIDS). After autoimmune and infective causes were ruled out and considering the hypopyon was sterile, a diagnosis of Mooren's ulcer was made and topical steroids were incorporated. After 2 months, the epithelium healed with stromal scarring and the hypopyon resolved. Her vision subsequently improved to 6/24.

Conclusion: An initial presentation of Mooren's ulcer with hypopyon is extremely rare however prompt management with topical steroids and systemic NSAIDs without the use of any systemic steroid or surgical intervention has proven to be adequate in this case.

74. A Case Report: Intraocular Tuberculosis (TB) Manifestations Due to TB-Associated Delayed Hypersensitivity Response

Authors : Bin Hoo Teo, Teik June Ling, Safinaz Mohd Khialdin
Institution : Universiti Kebangsaan Malaysia (UKM)

Objective: Inflammatory venous occlusive disease is characterised by peripheral non-perfusion, neovascularization and recurrent vitreous haemorrhage (VH). It may be caused by immune-mediated hypersensitivity response to M. tuberculosis. We described a case of young lady with ocular manifestations likely due to TB-related hypersensitivity reaction.

Method: Case report.
Result: A 21-year-old Indonesian lady without past medical history presented with floaters associated with blurring of vision in both eyes (BE) of one-week duration. She had 1 prior episode of similar symptoms three-month ago in Indonesia which resolved after treatment with steroid eye-drops. Examination showed no RAPD. Visual acuity was 6/18 in the right eye (RE) while 6/12 in the left eye (LE). There was no signs of granulomatous anterior uveitis, but there was anterior vitreous cells 2+. Fundus examination showed vitreous haemorrhage in the RE and organised old VH in the LE. BE optic discs were swollen, hyperemic with neovascularization. No tuberculoma, choroiditis or sub-retinal abscess seen. Fluorescein angiography showed BE disc neovascularization with late leakage and areas of capillary non-perfusion. Her Mantoux test was 20mm, however, chest X-ray did not show any pulmonary involvement. Other connective tissue screening were unremarkable. She was started with oral anti-tuberculosis treatment and oral prednisolone (0.5mg/kg). Laser photocoagulation was applied to BE in view of proliferative ischemic retinopathy. Her visual acuity improved to BE 6/9 after treatment initiation and the neovascularization slowly regressed.

Conclusion: Intra-ocular TB may mimic other uveitic conditions. High clinical suspicion and prompt treatment improve visual outcome.

75. A Case of Paediatric Clinical Isolated Syndrome Presenting with Optic Neuritis

Authors : Ting Xiao Wei, Julian Ng Hooi Shan, Yew Chien Voon
Institution : Hospital Serdang

Objective: To describe a case of bilateral optic neuritis in a 6 year old girl secondary to demyelination, with emphasis on approach, investigation and management.

Method: Case report.

Result: A previously well 6-year-old girl, presented with one-day history of bilateral lost of vision associated with retrobulbar eye pain and intermittent fever for two weeks. Upon examination, vision in the right eye was hand movement and left eye was no perception to light. Both eyes pupils were dilated 5mm, sluggish, no relative afferent pupillary defect. Anterior segment examination was normal. Optic disc was pink and not swollen. Systemic neurological examination was normal. Extensive blood investigations revealed raised white cell count, ESR and CRP. Immunology markers and infective screening was normal. Magnetic Resonance Imaging of the Orbit, Brain and Spine revealed bilateral optic nerves swelling with high T2 signal intensity and multifocal foci of high T2W1 signal intensity at the white matter of the bilateral fronto-temporo-occipital lobes and the left occipital lobe. Lumbar Puncture showed a normal Cerebral spinal fluid analysis. She was commenced on intravenous Methylprednisolone 10mg/kg/tds for 5 days followed by tapering dose of oral Prednisolone. Her vision improved to right eye 6/9 and left eye 6/12 at two weeks post treatment.

Conclusion: Clinical Isolated syndrome (CIS) is a single event of demyelination isolated in time. MRI findings of dissemination in time and space are high risk of conversion to clinically definite multiple sclerosis. Therefore, long term follow up is important to identify conversion.

76. Comparison of Choroidal Thickness Measurements between Swept-Source and Spectral-Domain Optical Coherence Tomography

Authors : Cheong Kai Xiong, MBBS, Colin S. Tan (FRCSEd),
Louis W. Lim (MBBS), SriniVas R. Sadda
Institution : Singapore National Eye Centre

Objective: Choroidal thickness (CT) measurements differ between swept-source optical coherence tomography (SS-OCT) and spectral-domain OCT (SD-OCT) devices for point thickness measurements. We aimed to assess the comparability of mean macular CT measurements between SS-OCT and SD-OCT devices.

Method: In a prospective cohort study of 25 healthy volunteers, OCT scans were performed sequentially with the DRI OCT-1 and Spectralis OCT using standardised imaging protocols.

These OCT scans were independently graded by reading centre-certified graders to obtain mean CT in the various ETDRS subfields. Paired *t*-tests and intraclass correlation coefficients (ICCs) were used to compare the measurements.

Result: The difference in mean central subfield CT between DRI OCT-1 and Spectralis was 49.3µm (p<0.001), while differences in CT in various ETDRS subfields varied from 42.1µm to 67.2µm. After manual adjustment of the segmentation boundaries for the central subfield in the DRI OCT-1, the mean central subfield CT for DRI OCT-1 increased from 263.1µm to 293.3µm (p<0.001), and the resultant difference between DRI OCT-1 and Spectralis decreased from 49.3µm to 19.1µm (a decrease of 61.3%; p<0.001). CT between the 3D and radial scanning protocols of the DRI OCT-1 were highly comparable, with differences generally under 10µm (p<0.001) and ICC of 0.888 for the central subfield

Conclusion: CT measurements between automated segmentations from the DRI OCT-1 and manual segmentations on the Spectralis OCT may differ by more than 50µm. This difference can be reduced, but not eliminated, by manual adjustment of segmentation boundaries by trained graders, and should be accounted for when comparing results between the two devices.

77. Associations of Genetic Loci with High Myopia in A Chinese Male Population

Authors : Cheong Kai Xiong, MBBS, Rita Yu Yin Yong (PhD),
Mellisa Mei Hui Tan (BSc), Frederick Lian Kheng Tey (PhD),
Benjamin Boon Chuan Tan (FRCSEd), Pavandip Singh Wasan (BSc),
Paul Songbo Zhao (FRCSEd), Eric Peng Huat Yap (PhD),
Gerard Nah Kwang (FRCSEd), Marcus Chiang Lee Tan (FRCSEd)
Institution : Singapore National Eye Centre

Objective: To demonstrate associations of genetic loci with high myopia in young adult Chinese males in Singapore using a list of candidate genetic loci from previous Chinese Han population studies.

Method: This is a case control study of 193 high myopes with 135 age- and ethnicity-matched emmetropes as controls. A total of 5 candidate loci represented by 25 Single Nucleotide Polymorphisms (SNPs) were analysed. DNA extraction from venous blood was achieved using the Qiagen QIAamp DNA Blood Mini Kit and genotyped on the Sequenom MassARRAY platform with the iPLEX^{TM} Assay. Chi square and logistic regression analyses ascertained association of SNPs with high myopia in dominant, recessive, co-dominant, and allelic models. Linear regression was performed to ascertain association with axial length. Permutation testing was used to correct for multiple testing bias. For loci which demonstrated positive correlation with high myopia, haplotype association tests were performed and linkage disequilibrium maps were constructed.

Result: Two loci, which are *VIPR2* (Locus 7q36.3) [RS885863, RS2540352 and RS399867] and *SNTB1* (Locus 8q24.12) [RS7839488, RS4395927 and RS6469937], demonstrated significant associations with high myopia. The haplotypes ACGA and GACAT in *VIPR2* and ATGA in *SNTB1* remained significantly associated with high myopia even after permutation testing. The effect alleles in these SNPs were significantly associated with axial length (p<0.05).

Conclusion: *VIPR2* and *SNTB1* are associated with high myopia in a Chinese population in Singapore. The mechanisms of how they contribute to high myopia need to be investigated. This work may aid risk stratification for high myopia in the future.

78. Learning From the Surgical Nightmare: Acute Intraoperative Suprachoroidal Haemorrhage

Authors : Jacqueline Ting Yih Ling, Tan Teng Siew MD, Humayun Akhter Faisal M.MED (Ophthalmology), Pin Shin Wei M.Med (Ophthalmology)
Institution : Hospital Sibu

Objective:
To review cases of acute intraoperative suprachoroidal haemorrhage (AISH) and identify the risk factors.

Method: Case series.

Result:
Case-1: A 32-year-old lady, no underlying medical illness, presented with acute right eye pain and worsening vision. She had history of progressive blurry vision without pain for past one year but did not seek medical attention. Examination demonstrated visual acuity (VA) of hand movement, intraocular pressure (IOP); 46mmHg and positive relative afferent papillary defect (RAPD). Patient had subluxated cataractous lens with no fundus view. Intracapsular cataract extraction (ICCE) was planned with pre-operative IOP; 21mmHg. Surgery was complicated with vitreous loss upon lens delivery and AISH occurred. Wound was closed and sclerotomy performed. Post-operatively, VA became NPL but patient was satisfied as there was no more pain.

Case-2: A 85-year-old lady with underlying hypertension presented with acute right eye pain and blurry vision. Significant history includes blunt trauma years ago but did not affect her vision. Examination revealed VA of no light perception, IOP; 40mmHg and positive RAPD. There was dense intumescent cataract with no fundus view. ICCE was planned with pre-operative IOP; 24mmHg. Surgery was complicated with vitreous loss post lens delivery and AISH occurred. Wound was closed and sclerotomy performed. Post-operatively, VA remained NPL.

Conclusion: AISH is a devastating complication associated with incisional ocular surgery. We cannot ignore the individual predisposing factors depicted; advanced-age, hypertension, glaucoma and subluxated lens. Additionally, both have similar intra-operative risk factors; vitreous loss and transient hypotony. Awareness and understanding can lead to better management pre-operatively and post-operatively.

79. Bee Sting of the Cornea

Authors : Rafikah Mahadi, Che Mahiran Bt Che Daud
Institution : Hospital Sungai Buloh

Objective: To report a case of cornea injury by bee sting with its complications and management.
Method: Case report.

Result: A 45 year old gentleman presented with excruciating painful right eye, poor vision and epiphora after 2 hours alleged corneal bee sting injury. The best corrected visual acuity (BCVA) in the affected eye was counting finger 2 feet. Ocular examination revealed 2 retained barbed stingers that were embedded at 9 o clock paracentral of deep cornea stromal with generalized corneal oedema, Descemet's membrane striae and large epithelial defect. Intraocular pressure was normal with moderate anterior chamber inflammation and no evidence of hypopyon. The posterior segment could not be visualized due to severe corneal oedema. However B-scan ultrasound of the globe was unremarkable. He was treated with intensive topical prednisolone acetate 0.1% hourly, topical levofloxacin 0.5% 6 hourly and topical cycloplegia with close monitoring of infection. During his follow after 1 month, his symptoms were improving with resolution of corneal oedema. His best corrected visual acuity (BCVA) also improved to 6/6. In view of resolution of inflammation and improvement of vision, he was treated conservatively.
Conclusion: Cornea bee sting injuries are rare occurrences but can result in various disastrous ocular complications. There is no clear guideline for management of affected patients and clinical approach to corneal bee stings remains controversial, ranging from conservative to surgical choices. Nevertheless, it is important for ophthalmologists to take an early and prompt action to prevent permanent corneal damage and intraocular complications.

80. Tears Oxidative Stress Markers in Malay Age-Related Macular Degeneration Patients

Authors : Yi-Ni Koh, Embong Zunaina, Ahmad Tajudin Liza-Sharmini, Mei Fong Chong, Che-Badariah Abd Aziz
Institution : Universiti Sains Malaysia

Objective: The aim of our study was to evaluate the level of oxidative stress markers, namely catalase and malondialdehyde in tears among ARMD patients.

Method: A comparative cross sectional study was conducted between September 2015 and November 2017 involving Malay patients with confirmed diagnosis of ARMD, attending eye clinic of two tertiary hospitals in Malaysia. Non-ARMD patients were selected as a control group. Tear samples were collected by using Schirmer paper. Laboratory analysis was performed to test on catalase and malondialdehyde level of tears using oxidative stress markers kits.

Result: A total of 136 ARMD patients (early ARMD: 68 patients, late ARMD: 68 patients) and 68 controls were included into the study. Mean catalase level was significantly lower in ARMD patients as compared to controls (1348.97 SD 109.11 µM vs 1453.38 SD 38.87 µM, P<0.001). There was no significant difference for malondialdehyde level between ARMD and controls. Catalase level was significantly lower in late ARMD group as compared to early ARMD group (1309.29 SD 112.47 µM vs 1388.06 SD 100.31 µM, P=0.044). Among the subtypes of neovascular late ARMD, catalase level was significantly higher in idiopathic polypoidal choroidal vasculopathy (IPCV) group compared to neovascular ARMD (1393.24 SD 53.12 µM vs 1267.27 SD 128.21 µM, P=0.031).

Conclusion: Insufficient antioxidant capacity (lower catalase level) may play an important role in pathogenesis of ARMD. Catalase level was significantly related to severity of ARMD and IPCV among the subtypes of neovascular late ARMD**.**

81. Fronto-ethmoidal Sinus Mucocele with Secondary Proptosis

Authors : Muhammad Yusuf Bin Abdurrahman, Prakash Supahiah, Nik Azrizie Bin Muhamed, Goh S.Y
Institution : Hospital Segamat

Objective: Report a case of fronto-ethmoidal sinus causing secondary proptosis.

Method: Case Report.

Result: Paranasal sinus mucoceles are slowly expanding cystic lesion consisting of mucus and desquamated respiratory epithelium within paranasal sinus commonly affecting frontal and ethmoidal sinuses caused by outflow obstruction at sinus ostia. Though benign, it has tendency to expand within the sinus, later leading destruction of the surrounding bony wall ,allowing mucocele to expand in the path of least resistance such as towards the orbit, adjacent sinuses, nasal cavity or through skin. Frontal sinus shares the floor with orbital roof, hence mucoceles can encroach the orbit, expand within orbital cavity, leading to ocular displacement, proptosis, ophthalmoplegia and lid distortions. Frontal ethmoidal sinus mucoceles is a common cause of unilateral non-axial proptosis and if left untreated can became infected leading to complications such as cavernous sinus thrombosis and meningitis. 58 year old Chinese gentlemen presented to ophthalmology department of Segamat Hospital with 1 year history of left eye periorbital swelling and forward protrusion of left eye that gradually worsen. Patient's vision was unaffected, and no diplopia or painful ocular movement.
Patient has left nasal blockage with left unilateral rhinorrhoea prior to presentation. CT-Brain revealed frontal and ethmoidal mucoceles with mass extension into left orbit. Patient referred to otorhinolaryngology colleague and proptosis resolved after removal of the mucoceles.

Conclusion: Team approach between ophthalmologist and otorhinolaryngologist is essential for management of proptosis secondary to frontal ethmoidal mucoceles and it carries a good visual prognosis with timely intervention.

82. Case Series : Aflibercept in Treatment Naive vs Refractory DME

Authors : Brindha Gulendran, Azlan Adnan, Hanizasurana H.
Institution : Hospital Selayang

Objective: To assess short-term functional and anatomical outcomes of Aflibercept in treatment of DME, naïve versus refractory diabetic macular edema (DME).

Method: We included retrospectively , 4 eyes with persistent DME after at least 3 Ranibizumab Intravitreal injections (IVI) spaced 4–6 weeks apart prior to conversion in the refractory group and 4 eyes of patients who have never received any intravitreal injection in the treatment naïve group. All patients received at least 2 Aflibercept injection at 4-6 weeks interval afterwards. Patients were followed with monthly visual acuity and optical coherence tomography (OCT).

Result: All patients were between ages 50 and 70 years. There were 3 females and 2 males. Mean BCVA was 6/60. 3 eyes achieved complete resolution at third dose of IVI Aflibercept while one eye showed impovement after 6 injections in the treatment naïve group. Mean central retinal thickness (CRT) improved from 543microns to 392microns in the refractory group at 3rd dose of IVI Aflibercept. However, one patient experienced high IOP and glaucomatous optic disc progression following intravitreal Aflibercept injection.

Conclusion: Switching to Aflibercept in refractory DME results in significant functional and anatomical improvement. Visual and anatomical improvement of refractory DME patients were comparable to the treatment naïve patients. It is an alternative treatment for central diffuse DME in patients who are not suitable for focal or grid laser. It is important to monitor intraocular pressure for all patients receiving intravitreal anti-VEGF and strictly in high risk group.

83. Toxic Anterior Segment Syndrome Post Intravitreal Ranibizumab Injection

Authors : Mahani Binti Mastor, Nor'ain Mohd Rawi, Azian Adnan, Hanizasurana Hashim
Institution : Hospital Selayang, Hospital UKM

Objective: To report a case of Toxic Anterior Segment Syndrome post intravitreal Ranibizumab Injection

Method: This is a case report of a rare severe inflammation post intravitreal anti VEGF injection.

Result: A 53 year old woman with poorly controlled Diabetes Mellitus presented to eye clinic for follow up of Diabetic Retinopathy. The visual acuity was 6/36 on the right and 6/40 on the left. Fundus examination showed mild Non-Proliferative Diabetic Retinopathy (NPDR) with centrally involved Diabetic Macula Oedema (DME) in both eyes. Intravitreal Ranibizumab 0.5mg/0.05ml was injected in the right eye under aseptic technique on the same day of presentation. About 2 hours post injection she returned with complaint of worsening of vision over the treated eye. Visual acuity dropped to counting finger. There was diffuse corneal oedema, intense anterior chamber inflammation with fibrin formation and raised IOP of 24mmHg with no fundus view. B scan showed no loculation. Diagnosis of Toxic Anterior Segment Syndrome (TASS) was made and intensive topical corticosteroid was instilled. She responded well to the treatment with vision of 6/36 pinhole 6/24 on the next day. Her vision further improved to 6/24pinhole same with reducing DME and absence of sequelae of chronic inflammation.

Conclusion: TASS is an acute sterile inflammation with diffuse corneal oedema which typically occurs 1-2 days following intraocular procedure. Although the cause in this case is inexplicable, poor diabetic control might be the major risk factor of getting TASS in this patient. Early diagnosis and treatment are crucial to prevent further complications of TASS.

84. Meliodosis: A Rare Cause of Periorbital Abscess

Authors : Tan Teng Siew, Jacqueline Ting Yih Ling, Niki Ho Wai Wye, Pan Shin Wei
Institution : Hospital Sibu

Objective: To report a rare presentation of meliodosis causing periorbital abscess.

Method: Case Report.

Result: A 6 years old girl from Kanowit, with no underlying medical illness presented with right lower periorbital abscess associated with fever for three days. Significant social history includes river bathing and drinking rain water due to no access to clean water supply. She denied history of insect bites or trauma. Ocular examination was unremarkable. She was started on oral Augmentin. Incision and drainage of the abscess was done. Swab culture reported as Burkholderia pseudomallei. Patient was then referred to paediatrician. Full examination with abdominal ultrasound was done with no other remarkable findings. Patient was planned for full treatment of meliodosis; initial intensive therapy of intravenous ceftazidime for two weeks followed by maintenance oral sulfamethoxazole and trimethoprim for three months. She is currently responding well to the treatment and the disease was notified.

Conclusion: Periorbital abscess is not rare in children and the common organisms involved include Staphylococcus and Streptococcus species. This case illustrates a rare presentation of meliodosis causing periorbital abscess. Anand Mohan et al. highlighted the high incidence of paediatric meliodosis in central Sarawak. Children frequently presented with disseminated disease and had an alarmingly high death rate. Thus, prompt diagnosis and early treatment is vital to prevent dissemination of bacteria and other life threatening complications.

85. Bisymptomatic Sturge Weber Syndrome: A Case Report of Facial Nevus Flammeus and Choroidal Hemangioma, With its Associated Devastating Complications

Authors : Niki Ho Wai Wye (MBBS), Chan Jinn Shian (MD), Humayun Akhter Faisal (M.MED Ophthalmology), Pan Shin Wei (M.MED Ophthalmology)
Institution : Hospital Sibu

Objective: To arouse clinical understanding because of its rare incidence, delayed presentation, and potential devastating complications.

Method: Case Report.

Result: We report a 28-year-old male, with cutaneous (port-wine stain birthmark on his left face), but no prior neurological manifestations such as headaches or seizures. He presented with a three-month history of progressive, painless left blurring of vision.

Left eye visual acuity on presentation was 1/60, with a positive relative afferent pupillary defect. Intraocular pressure was low over the left eye. Anterior segment examination was unremarkable, without any telangietatic conjunctival or episcleral vessels. Fundus examination demonstrated a circumscribed choroidal hemangioma with exudative retinal detachment. The right eye was unremarkable.

Transpupillary thermal therapy (TTT) was performed and top up TTT was done. However, the choroidal effusion and exudative retinal detachment was refractory and there was scarring adjacent to the fovea due to his treatment. Patient also developed secondary glaucoma, which required a Baerveldt implant.

Despite best efforts, patient’s vision deteriorated to light perception only but remained painless.

Conclusion: Although rare, choroidal hemangiomas can be present in 31-71% of Sturge Weber Syndrome patients. Not all cases are known to be Sturge Weber because they may only initially have cutaneous manifestations. Choroidal hemangioma predominantly presents between the second to fourth decades of life, thus we must have a high index of suspicion in patients having port-wine stains even without prior neurological manifestations. Early recognition of ocular changes would help improve the successful management of ocular complications.

86. Bang, Bang, Bang: A Case Series

Authors : Azizul Nur Bin Abdul Aziz Al-Akbar, Jessica Mani A/P Penny Tevaraj, Shuaibah Ab. Ghani
Institution : Sabah Women and Children's Hospital

Objective: Toy guns are one of the main causes of toy-related ocular trauma. These traumas may cause penetrating or blunt injuries. The sexual predilection favours males with the male-to-female ratio of 5:1.

Method: Case series.

Result: Includes 3 children with age ranging from 4 to 11 years-old. The first child is a 4 years-old Malay girl who was visually exploring the barrel of a homemade air gun when it accidentally fired a marble bullet. She sustained left full-thickness upper eyelid laceration and retrobulbar foreign body with subretinal haemorrhage involving the macula. A multidisciplinary team consisting of ophthalmology, maxillofacial and neurosurgical removed the projectile.

Another 2 boys aged 8 and 11 years-old respectively sustained injuries from purchased toy guys which were thrown to their faces. They each sustained traumatic hyphaema, mydriasis and uveitis. In addition to that, the 11 year-old also sustained subluxated lens and Berlin's oedema with subretinal haemorrhage.

Conclusion: Toy-related injuries are quite common and the trauma can cause severe vision loss and devastating injuries if patients are not seen promptly as their projectile have the capability of causing penetrating injury.

87. Don't Judge a Book by its Cover

Authors : Azizul Nur Bin Abdul Aziz Al-Akbar, Jessica Mani A/P Penny Tevaraj, Shuaibah Ab. Ghani
Institution : Sabah Women and Children's Hospital

Objective: Orbitocranial trauma with foreign body (FB) generally presents in a strikingly obvious manner. However, there are times when the presentation may be very subtle. We report 2 cases of paediatric orbitocranial trauma with FB; one of them inconspicous.

Method: Case report.

Result: A 5 year-old female presented with left upper eyelid swelling and pain after a fall. She had a small laceration wound just below the superior orbital rim with periorbital haematoma. Extraocular movements were restricted on upgaze and noted on palpation, a firm mass below the wound. Fundus examination was normal. There was no neurological deficit. Magnetic resonance imaging revealed a long, linear FB extending from left orbit through the medial part of temporal lobe up to the brainstem. A multidisciplinary team consisting of ophthalmology and neurosurgery extracted the FB which was revealed to be a lead pencil.

The next case is a 4 year-old male presented with right eye pain and bleeding after being outdoor. He had a nail piercing through the upper eyelid and embeded within the extraorbital space of the right orbital cavity. Computer tomography showed nail causing full-thickness lid laceration with and intact globe. Surgical removal of nail and toilette and suturing of puncture wound was done.

Conclusion: Trivial ocular traumas can be associated with more serious occult problems. High index of suspicion is needed where children are involved. A thorough history can be arduous but meticulous examination of patients and relevant imaging studies can help prevent clinical disasters.

88. Visual Prognosis in Perforating Eye Injury with Intraocular Foreign Body

Authors : Siti Amirah Binti Hassan, Zalilawati Mohamad, Norlaila Talib
Institution : Hospital Serdang

Objective: To study visual prognosis of perforating eye injury.

Method: Case series.

Result:
CASE 1
A 41-year-old, Rohinya, male presented with right eye pain and blurring of vision after being hit by a nail while fixing a cabinet with nail gun. On examination, there was no relative afferent pupillary defect, counting finger vision with nail measuring 2mm penetrated the cornea 3mm from limbus at 6 o'clock and exit on sclera 4mm from limbus at 9 o'clock. The anterior chamber was shallow and lens was cataractous. An emergency right eye nail removal, toilet and suturing, intravitreal ceftazidime and gentamicin was done. Patient was completed intraveneous ciprofloxacin for 3 days and given dexamethasone and moxifloxacin eyedrops. B-scan revealed vitreous haemorrhage, but the retina was flat. His vision 2 weeks after injury was hand movement.

CASE 2
A 22-year-old, malay, man presented with right eye pain and blurring of vision after being hit by fish-hook when he pulled the stuck fish rod. During presentation, his right vision was 6/60 with no afferent pupillary defect. There was a fish-hook entered the cornea 2mm below pupillary margin and exit the sclera 3mm from the limbus at 8 o'clock. The anterior chamber was shallow with cataractous lens. The patient underwent fish-hook removal, toilet and suturing. He completed intravenous ciprofloxacin for 3 days and given dexamethasone and moxifloxacin eyedrops. His vision 1 week after injury was 6/24. The fundus revealed normal findings.

Conclusion: Visual prognosis of perforating eye injury depends on location of the perforation, initial visual acuity, and early surgical intervention.

89. Metastatic Orbital Tumor as First Manifestation of Renal Cell Carcinoma

Authors : Tan Shu Yu, CP Siuw, Safinaz Mohd Khaldin, ML Bastion
Institution : Hospital Universiti Kebangsaan Malaysia (HUKM)

Objective: To report a rare case of metastatic orbital tumor as first manifestation of renal cell carcinoma.

Method: Case report.

Result: A 73-year-old female active smoker presented with painless left eye proptosis for 2 months duration. It was associated with blurring of vision and diplopia. Otherwise, systemic review was unremarkable. Patient had family history of carcinoma. On examination, left eye was proptosed and inferiorly displaced. There was a firm, pulsatile multilobulated mass over left supraorbital region extending to left frontal region measuring 6cm x 6cm, with dilated superficial vessels, non tender, no skin changes and no bruit on auscultation. Left extraocular movements were restricted. Left optic nerve function was impaired. Computed tomography (CT) of orbit showed a mass arising from left frontal and greater wing of left sphenoid bone, with infiltration to left lateral rectus, left superior oblique and lacrimal gland. Further systemic investigation with CT thorax, abdomen and pelvis revealed left renal cell carcinoma with para-aortic nodes, lungs and bone metastases. Patient was planned for palliative care.

Conclusion: Orbital metastasis from renal cell carcinoma is extremely rare. Orbital involvement presenting as first manifestation of advanced renal cell carcinoma is possible. Lesion arising from orbital bone raises suspicion of metastatic lesion. Thorough assessment must be carried out to search for primary tumor.

90. Orbital Myeloid Sarcoma - A Dilemma in Managing Proptosis

Authors : Elaine Gan Ju Yen, Lott Pooi Wah, Hanida Hanafi, Shuaibah BInti AB Ghani
Institution : Hospital Queen Elizabeth

Objective: To Illustrate a Rare Cause of Childhood Proptosis – Orbital Myeloid Sarcoma
Method: Case Report.

Result: A 3-year-old Malay girl presented with painless, proptosis of the left eye for one month. Examination revealed left eye non-axial proptosis and dystopia of orbit inferonasally. There was limitation of left extraocular movement on lateral and upgaze. On palpation, there was an ill-defined and non-tender mass at the superotemporal orbital region. Fundus examination was unremarkable. Systemically, child was active, afebrile and pink. There were no bruising, constitutional symptoms, palpable lymph nodes or hepatosplenomegaly noted. Magnetic Resonance Imaging (MRI) of brain and orbit revealed a homogenous enhancing left superolateral orbital mass at lacrimal fossa measuring 4.1cm x 1.8cm x 2.8cm. The mass also displaced the left lateral rectus, extending superolaterally, encasing the superior rectus muscle. There was no brain, bone or sinus involvement. Peripheral blood film was normal, the total white blood cell was adequate with normal morphology. Initial differential diagnosis was

pseudotumour, rhabdomyosarcoma and orbital lymphoma. An orbital mass biopsy was arranged which revealed neoplastic cells with histology genes corresponding to orbital myeloid sarcoma. Patient is currently being managed by paediatrics oncology and ophthalmology team. She is planned for bone marrow examination and chemotherapy.

Conclusion: Orbital myeloid sarcoma is an uncommon cause of childhood proptosis that needs to be taken into consideration as a differential diagnosis for childhood proptosis. A timely diagnosis and treatment is very crucial for these children.

91. Glaucoma & Silicone Oil: How effective is Baerveldt Implant as Primary Surgical Intervention in Pseudophakic Eyes?

Authors : Kee Rong Sheng, Ong Poh Yan M.S.Oftal (UKM)
Institution : Hospital Selayang

Objective: To evaluate the efficacy of Baerveldt implant as primary surgical intervention in managing post Vitreoretinal(VR) surgery silicone oil(SiO) induced glaucoma in pseudophakic eyes in Hospital Selayang, Malaysia, a 5-years review.

Method: A retrospective, 5 years case series review (from 1st January 2012 till 31st December 2017). All patients in Hospital Selayang that had vitreoretinal and cataract surgeries with SiO tamponade and developed secondary glaucoma not controlled with medical therapy, and had Baerveldt implant inserted as primary intervention were reviewed.

Result: A total of 9 Baerveldt implantations were performed in 9 pseudophakic eyes. The number of vitreoretinal procedures varied between 2 to 5,with SiO tamponade, and all eyes had emulsified SiO in anterior chamber(AC) and angles prior to implant surgery. Duration to development of secondary glaucoma was between 1 week to 6 months post SiO tamponade.

Mean pre-operative intraocular pressure(IOP) before Baerveldt implant surgery was 48 mmHg(range 33-58 mmHg) on maximum tolerable glaucoma medications. Postoperatively, the mean IOP reduction from baseline were 62.4%, 66.3% and 65.0% at 3 months, 6 months and 12 months respectively. At 1 year, IOP control in 8 patients were satisfactory, mean of 13mmHg(range 08-18mmHg; 2 without medication, 6 with some topical glaucoma medications). One patient developed complication of persistent hypotony due to repeated wound dehiscence. Types of intraocular-lens(IOL) do not have any effect on IOP control in these patients.

Conclusion: Baerveldt implantation provided favourable IOP control in our patients. Thus, GDDs are effective tools that could help in managing IOP in these SiO induced glaucoma cases.

92. More Than Just Red Eyes

Authors : Somasundranayaky a/p Sivalingam, Mushawiathi Musthapha,
Prof Mae- Lynn Catherine Bastion
Institution : Ophthalmology Department, PPUKM

Objective: To report a case Systemic Lupus Erythematous (SLE) presenting with conjunctivitis and dry eyes.

Method: Retrospective case report.

Result: A 17 year old girl, with no previous medical illness complained of bilateral eye redness of 1 day duration associate with bilateral eye itchiness and watery discharge. There was no blurring of vision. She also had history of flu like symptoms and fever of 1 week duration with generalized weakness. There were also rashes over her forearm.
Visual acuity was 6/6 and N6 in both eyes. No Relative Afferent Pupillary Defect. Bilateral conjunctiva were injected with papillae seen on her upper eyelids. There were generalized superficial punctate epithelial erosions. Otherwise the rest of the anterior segment were normal with intraocular pressure both eyes 12. Fundus examination revealed bilateral hyperemic optic disc swelling with blurred margin. Brightness and red saturation were equal in both eyes. Farnsworth Dichotomous (D-15 Colour vision) test was normal. Initial Humphrey Visual test was unreliable but subsequent test was normal.
Blood investigation showed severe thrombocytopenia with platelet of 7x 109.ANA, Direct and Indirect Coombs test were positive.
A diagnosis of bilateral eye optic disc swelling secondary to SLE and bilateral conjunctivitis with dry eyes were made. Patient was treated by the Medical team with immunosuppressant dose of systemic steroids for SLE with hematology and cutaneous involvement being detected subsequently.

Conclusion: Ocular manifestation of SLE should be considered as important features of SLE. Red eye due to keratoconjunctivitis is the most common ocular manifestation of SLE but SLE rarely present with this. It is imperative for medical practitioners to check the fundus and optic disc in cases of conjunctivitis.

93. A Rare Case Report of Choroid Melanoma

Authors : Julian Ng Hooi Shan, Yew Chien Voon, Lai Zhong Yang
Institution : Hospital Serdang

Objective: To describe a case of choroid melanoma in a 64 years old lady.

Method: Case Report.

Result: A 64 years old, Chinese lady who was under our follow up for Bilateral Primary Open Angle Glaucoma , has incidental findings of left eye lesion on fundus examination during routine eye checkup. On examination, her right eye vision was 6/9 and her left eye vision was 6/15. Anterior segment examination was normal. There was hyperaemic optic disc with large brownish raised lesion measuring 8 disc diameter with lipofuscin, and pigmented opacities in vitreous. B scan showed collar stud lesion with moderate internal reflectivity. MRI orbit showed anteromedial mass measuring 7.2x7.0mm at the base and 8.2mm in height. Lesion was hyperintense in T1 and hypointense in T2. There was no extrascleral or optic nerve extension. Patient was then planned for enucleation.

Conclusion: Choroid Melanoma is rare, but is the most common occurring intraocular malignancy among adult. Malignant melanomas in uveal are found more often in the choroid than in iris or ciliary body. The clinical presentation of malignant uveal melanoma is non-specific and its associated with the location of tumor. Therefore, routine dilatation of fundus is important for early detection of the disease since most patient is asymptomatic.

94. Probably False Positive Fungal Culture from Environmental Contamination

Authors : Chong Jia Cherng, Hanizasurana binti Hashim, Nor'Ain binti Mohd Rawi, Wan Norliza binti Wan Muda
Institution : Hospital Selayang/Universiti Malaya

Objective: To investigate the sudden rise of probable false positive fungal endophthalmitis between September and November in Hospital Selayang.

Method: Retrospective case analysis for the five cases with positive mold culture, including sample types and sampling location.

Result: Four out of 5 positive mold cases (80%) were sampled from the same procedure room and 1 case was from operating theatre. Different operators took the vitreous tap. Fungal culture yielded three non-specific non-sporulating hyaline mold, one case of geotrichum species and one dematiaceous mold. Since none of the cases resembled fungal endophthalmitis clinically, repeated sample were taken and revealed negative fungal growth. Investigation of the procedure room found that the air-conditioner was not functioning leading to hot and humid environment. A stand-fan was used to provide air circulation. Multiple black spots on the ceiling tiles may represent fungal growth. Sample swabs taken from the air-conditioner vent showed negative culture but no sample taken from the ceiling tiles. Prompt corrective measures including strict adherence to cold chain transportation and keeping of culture plate at all level, thorough room disinfection, air-conditioning and dirty ceiling replaced, absolute avoidance of stand-fan, change of curtains, strict entrance into procedure room, stringent used of mask and re-emphasis on maintaining sterility during sampling. Following rectifications, subsequent samples taken showed no fungal growth in non-clinical suspect fungal endophthalmitis to date.

Conclusion: Strict adherence to standard operating procedures, cold chain/sample transport, maintaining correct temperature/humidity of procedure room, proper air circulation and clean environment are important measures to reduce the possibility of fungal contamination.

95. Ocular Tuberculosis Masking as Diffuse Unilateral Subacute Neuroretinitis (DUSN)

Authors : Chan Jinn Shian MD, Niki Ho Wai Wye (MBBS), Tan Teng Siew (MD), Tan Li Mun (MOPHTHAL)
Institution : Hospital Sibu

Objective: To describe a case of unilateral ocular tuberculosis that initially presented as diffuse unilateral subacute neuroretinitis (DUSN).

Method: Case report.

Result: A 49-year-old village headman with no known comorbidities presented with left painless blurring of vision for two weeks. The best corrected visual acuity (VA) of the right eye was 6/6 and left eye (LE) was 3/60. The LE had moderate vitritis, vasculitis and crops of multifocal yellow-white lesions clustered over the macula. The optic disc was normal and relative afferent pupillary defect was negative. A presumptive diagnosis of DUSN was made due to his considerable exposure to feral animals and treatment with oral albendazole was hence started. A week later, new choroiditic lesions appeared over the superior nasal region of

the LE. Further investigations revealed a raised erythrocyte sedimentation rate and Mantoux test was 19mm with a normal chest radiograph. A diagnosis of LE ocular tuberculosis was made and anti-tuberculosis treatment was commenced. Two weeks later, his VA improved to 6/30 and fundoscopy showed no new lesions with resolution of the previous choroiditic lesions. After 6 weeks of anti-tuberculosis treatment, VA of the LE further improved to 6/9.

Conclusion: Ocular tuberculosis is a great mimicker of various uveitis entities. The most common manifestation of intraocular tuberculosis is posterior uveitis, particularly multifocal choroiditis. A high index of suspicion is paramount especially in tuberculosis-endemic areas because timely diagnosis and prompt treatment may prevent irreversible vision loss.

96. Bilateral Optic Neuritis.. Diagnostic Dilema

Authors : Nanthini Selvaraja, Anhar Hafiz, Nor Fadzillah, Raja Norliza
Institution : Hospital Melaka

Objective: To report a case of multiple sclerosis with bilateral optic neuritis

Method: Case report

Result: 14 years old malay girl with no known medical illness presented with bilateral painless blurring of vision for past 2 weeks. She had similar episode of ocular symptoms but resolved spontaneously. She had on and off headache for past 3 months. There was history of occasional urinary incontinence since the age of 7.
On ocular examination, her right visual acuity was 6/36 and left visual acuity was hand movement with positive relative afferent pupillary defect. Funduscopy examination revealed right hyperemic optic disc and left swollen hyperemic optic disc. Physical examination noted no neurological deficit. Lab investigation showed raised erythrocyte sedimentation rate and C-reactive protein with positive anti nuclear antibody. MRI brain, orbit and spine revealed multiple ill defined hyperintense lesion of variable size in the white matter of both centrum semiovale, corona radiata, right thalamus, both external capsules, right side of pons, both temporal lobes, right cerebellum and both middle cerebellar peduncles. Both optic nerve sheaths are mildly swollen. However no abnormal signal in the MRI spine. Patient was started on IV methylprednisolone 5 days followed by oral prednisolone in tapering dose over 2 months. 3 weeks after initiation of treatment, her both eye vision improved.

Conculsion: Optic neuritis in multiple sclerosis is usually unilateral in its clinical presentation. However 10% of cases can present as bilateral optic neuritis. Since bilateral symptoms are relatively uncommon other causes such as neuromyelitis optica should be considered.

97. Phacoemulsification Tunnel Fungal Infection: A Report of 2 Cases with Different Outcomes

Authors : Tan Shao Sze, Rebecca Louis, Liew On Heong, Rosilah Mohamad, Rohanah Alias
Institution : Hospital Kuala Lumpur

Objective: We report 2 cases of phacoemulsification tunnel fungal infection with similar presentation but different outcomes.

Method: Case report

Result: A 66 year-old diabetic male (Patient 1) and a 68 year-old non-diabetic female (Patient 2) were referred from a tertiary centre. Both underwent uneventful phacoemulsification through a temporal corneal incision in the right eye and were seen 6 weeks post-operatively. Both had prolonged inflammation post-phacoemulsification but did not respond to topical steroids.

Patient 1 had presence of mutton-fat keratic precipitates and anterior chamber cells. He was initially treated as intermediate uveitis for 5 months and later developed fungal keratitis at phacoemulsification tunnel wound site. Subsequently he underwent penetrating keratoplasty and was given intracameral voriconazole. His best-corrected visual acuity was light perception as compared to 6/60 at first presentation.

Patient 2 had suture abscess which was removed and treated but presented 4 months post-operatively with fungal keratitis at phacoemulsification tunnel. Intrastromal amphotericin B was given. Her condition improved with best corrected visual acuity 6/60 compared to 1/60 on presentation.

Both were treated as fungal keratitis with the diagnosis being made clinically. Microbiological investigations were unable to isolate any organism.

Conculsion: We should have a high index of suspicion of fungal infection in patients with prolonged inflammation post-phacoemulsification not responding to steroids. Early diagnosis is important because complications of fungal keratitis often result in poor visual prognosis.

98. 3 Years Old Evan Syndrom Child with Severe Retrobulbar Optic Neuritis Treated With IV Gamma Globulin

Authors : Muhammad Fadhli Bin Ab Hamid, Chaw May May, Angela Loo Voon Pei
Institution : Universiti Malaya Medical Centre

Objective: To report a case of Evan Syndrome kid with severe bilateral eye retrobulbar optic neuritis treated with IV Gamma Globulin.

Method: Case Reporting.

Result: A 2 years and 6 months old girl with underlying Evan Syndrome (rare auto immune disorder causing immunocompromisation, thrombocytopenia, haemolytic anaemia) presented with sudden onset bilateral eye loss of vision. She has mild URTI symptoms 4 days before. No eye pain, eye redness or history of trauma. She was promptly brought to UMMC.

Her visual acuity was light perception bilateral eye, walk with outstretched hands. Right Eye RAPD +VE, sluggish pupil bilateral eye. Fundus examination shows pink bilateral optic disc and no papilloedema.

Blood Investigation : All normal except for positive Anti-Myelin-Oligodendrocyte Glycoproteins(Anti-MOG)
MRI brain with contrast showed Bilateral Optic Nerve, Chiasm, optic tract oedema and swelling
Lumbar puncture study: Normal
IV methylprednisolone 20mg/kg was started which had extended until day 7. Her progress of

the visual acuity was monitored with Optokinetic Drum. It shown a slow response with steroid hence IV Gamma Globulin treatment was started for 2 days. Positive responds were seen as she slowly regained her vision back. Vision acuity at day 30 on onset was RE 3/60 LE 6/12 using Teller Acuity Chart.

Conculsion: Severe retroorbital optic neuritis is a rare presentation in Evan Syndrome. However hereditary cause of Optic Neuropathy (eg Leber disease) need to be ruled out in this case and hence she was scheduled for Complete Genome Sequence Test later under genetic clinic.
IV Gamma Globulin is an effective second line of treatment in this case.

99. Sixth Cranial Nerve Palsy : Different Aetiology

Authors : Suraya Bt Hashim, Rozita Ismail, Roszniza Ab Razak
Institution : Hospital Serdang

Objective: To present a series of sixth cranial nerve palsy of different causes.

Method: Case series

Result: Case 1
51 years old female, underlying left breast carcinoma, completed chemotherapy in 2014, presented with right eye bluring of vision and diplopia for one week. There was right 6th nerve palsy with bilateral disc swelling. CT scan showed temporal bone erosion suggestive of metastasis and right cavernous filling defect. She was then managed by oncology team and underwent radiotherapy.

Case 2
57 years old female underlying hypertension and diabetes mellitus, presented with recurrent episode of sixth nerve palsy. First episode was in March 2017 for left sixth nerve palsy, CT scan was done showed a multifocal infarct and she was then treated with statin. 2 months later, presented with bilateral sixth nerve palsy with optic disc swelling, and MRI done showed no significant findings. Lumbar puncture was done, benign intracranial hypertension was diagnosed. Steroid given to patient.

Case 3
55 years old gentleman, presented with diplopia for 3 days. Noted left sixth serve palsy noted. CT proceeded showed enhancing lesion of left cavernous sinus. MRI and MRA done showed ectasia of intracavernous portion of left ICA. He then managed by interventional radiologist and patient opted on conservative management.

Conculsion: We presented three cases of sixth nerve palsy of different aetiology; infiltration, idiopathic and microvascular. Sixth nerve has the longest intracranial course and vulnerable to compression.

100. A Year with a Steven Johnson Syndrome Sufferer - A Painful Journey to Recovery

Authors : Rachel Nge, Siti Zakiah Binti Md Khair, Raja Norliza Binti Raja Omar
Institution : Hospital Melaka

Objective: To document a case of severe Steven Johnson Syndrome (SJS) in a 30 year old gentleman and to discuss regarding possible reasons for his poor outcome.

Method: A 30 year old gentleman with no known drug allergies developed severe respiratory distress, skin blistering and both eye redness and pain after using chloramphenicol eyedrops and amoxycillin tablets. We treated him for bilateral pseudomembranous conjunctivitis with severe corneal dryness. Both eyelids were heavily excoriated with blistering. There were thick pseudomembranes covering both cornea. Chlamydia trachomatis and MDRO Acitenobacter baumanii were cultured from conjunctiva swab. He was also co-infected with herpes simplex virus. He was covered with intensive topical antibiotics, lubricants and steroidal eyedrops. After he was discharged, he suffered persistently with severe eye dryness, and developed recurrent corneal epidefects. Treatment used were contact lens use, lateral tarsorraphy, amniotic membrane patching, autologous plasma eyedrops and cyclosporine eyedrops instillation. Despite aggressive treatment, there was extensive symblepharon and fibrosis of both eyes. His right vision deteriorated to light perception, left vision was hand movement. He was referred to a corneal specialist, and was diagnosed with both eyes limbal stem cell deficiency. There's possible future plan of symblepharon release once the inflammation is controlled.

Result: SJS is a rare condition which affects the skin and mucous membrane, with 20% suffering from long term ocular complications. This patient's immunocompromised state may have contributed to his poor outcome.

Conculsion: Such devastating consequences can be reduced with aggressive intervention during the active phase to minimize loss of limbal stem cells.

101. Case Series of Optic Neuritis With Different Presentations and Visual Outcome

Authors : Nurul Faaiqah Jainuddin, Nor Fadhilah Bt Mohamad,
Assoc Prof Norlina Bt Ramli
Institution : Pusat Perubatan Universiti Malaya

Objective: To describe the clinical manifestation, management and outcome of optic neuritis

Method: Retrospective case series

Result: Case 1: A 23-year-old female presented with two-weeks history of left eye blurring of vision with pain on eye movement and headache. Visual acuity(VA) was hand movement and relative afferent pupillary defect was positive(RAPD) on left eye. Blood investigations were normal and CT scan showed no sign of optic neuritis. IV Methylprednisolone 1g OD was commenced for 3 days. VA improved to 6/12 after treatment.
Case 2: A 27-year-old Iranian lady with Bronchial Asthma presented with right eye blurring of vision for 5 days with retroorbital pain and pain on eye movement.VA was counting finger(CF) with positive RAPD on right eye. Blood investigations and MRI brain and orbit were normal. IV

Methylprednisolone 250mg qid was commenced for 5 days. VA showed no improvement after treatment.
Case 3: A 37-year-old female complained of right eye visual field defect especially temporal side for one-week, associated with headache, vomiting, and right side body weakness and numbness. BCVA was 6/18 with RAPD positive on right eye(RE). RE optic disc was swollen with visual field showed almost tunnel vision. Blood investigations, CT Brain, MRI orbit, brain and spine were normal. IV methylprednisolone was commenced for 5 days. VA improved to 6/12 after treatment.

Conculsion: The clinical course and prognosis of optic neuritis are variable but empirical treatment with high dose steroid may hasten visual recovery. Hence patient need to be counselled on the course of the disease before starting treatment.

102. Orbital Apex Syndrome : Case Series

Authors : Carynn Ng Mae Li, Lakana Kumar, Prof Catherine Mae Lynn
Institution : Hospital Kuala Lumpur

Objective: To report on three cases of orbital apex syndrome with various presentation and causes.

Method: Retrospective study of three cases with orbital apex syndrome. Case 1 presented with diplopia and blurring of vision. On examination we noted there was 2nd, 3rd, and 6th cranial nerve palsy. With further investigations there was a left nasal mass extending to the left orbit and left anterior cranial fossa and biopsy showed alveolar rhabdomyosarcoma. Case 2 presented with recurrent left eye pain and blurring of vision. On examination noted 2nd cranial nerve palsy and was treated with IV methylprednisolone. However the symptoms progressed to cause restricted all extraocular movement. Further investigation and biopsy noted an enhancing lesion of left orbital apex, left superior orbital fissure, left cavernous sinus towards left optic nerve that showed an aspergillus infection. Case 3 presented with diplopia. On examination showed isolated right 6th cranial nerve palsy. However it progressed to 3rd cranial nerve palsy. Further examination showed right orbital apex lesion most likely pseudotumour.

Result: All cases was referred to other relevant speciality for combined managements of the patients.

Conculsion: Orbital apex syndromes causes may vary from inflammatory, infectious, neoplastic, traumatic, and vascular conditions. Management is usually multidiciplinary to target the underlying cause.

103. Operating Theatre Efficiency in UMMC

Authors : Nurul Faaiqah Jainuddin, Assoc Prof Norlina Bt Ramli
Institution : Pusat Perubatan Universiti Malaya

Objective: To assess efficiency of maximizing operation time in main Operation Theatre (OT) at UMMC

Method: Retrospective clinical audit

Result: This audit topic was chosen after identifying issues with utilisation of operation time in main Operation Theatre (OT) at UMMC. The rationale of conducting this audit is to determine patient turnover time in operating theatre. The time taken was measured between patient's removal from the operating table to the next patient placed on operating table. The audit was conducted from January to March 2017. It was found that 8.65 % of cases (9 from total of 104 cases) were not adherent to standard of practise set by ophthalmology department. Most cases identified were from LA cases of cataract surgery. By focusing the audit on this issue and identifying the problem which leads to the delay of OT time, the standard operating procedure can be improved. Ultimately OT time can be better managed hence maximizing the cases for each OT.

Conculsion: Most common reasons for the delay are patient has uncontrolled blood pressure in ward just before sending patient to OT and in waiting bay. Other reason is patient become unstable after operation due to hypoglycaemia or dizziness.These have to be addressed to increase efficiency of operation theatre utilization.

104. Successful Keratoplasty in Post Severe Corneal Ulcer in One-Eyed Patient

Authors : Calista Nathasya Gunawan, Karina Luthfia, Made Susiyanti
Institution : Infection and Immunology Division, Department of Ophthalmology, Faculty of Medicine University of Indonesia – Cipto Mangunkusumo National General Hospital, Jakarta

Background: Corneal ulcer is the cause of corneal blindness that is often underreported but may be responsible for up to 2 million new cases of monocular blindness every year. Treatment varies depending on the etiology and severity of the disease. Topical and oral medication are usually given as the first line therapy. However, when a medical therapy is found ineffective, the infected cornea has to be replaced with a corneal graft or keratoplasty. Early keratoplasty, especially in one-eyed patient, is important to prevent total visual loss.

Objective: To report a case of a successful keratoplasty in post severe corneal ulcer in one-eyed patient.

Method: Case report.

Result: Case Presentation. A 36-year-old male with one-eyed blindness in the right eye complained of blurry vision in his left eye for the past 3 months due to mechanical trauma. Examination of the left eye showed the visual acuity was limited to light perception. Conjunctival and ciliary injection, corneal defect 0.8x0.5mm with feathery edge, hypopyon, infiltrate, and endothelial plaque were also found. KOH test patient was found positive. Patient was diagnosed with fungal corneal ulcer and received both topical and oral Fluconazole in the previous health care center, but no improvement was found. Keratoplasty was then performed to the patient, resulting in visual acuity improvement to 2/60 in day-1 post-surgery.

Conculsion: Conclusion. Early keratoplasty in one-eyed patients with post severe corneal ulcer that does not respond to medication is recommended to prevent complications and blindness.

105. Comparisons in Accuracy of Barrett Universal II Formula and SRK/T Formula for Intraocular Lens Power Calculation

Authors : Krystle Lena Thomspon, Rozila Binti Ariff
Institution : Hospital Selayang

Introduction: There is an increase in the number of cataract surgeries performed each year in Malaysia and a predictable post-operative refraction is of utmost importance for both patients and surgeons alike. Optimal intraocular lens (IOL) power calculation and selection are essential components of this process with various formulas being developed over the years to further improve the accuracy.

Objective: To evaluate and compare the accuracy of intraocular lens (IOL) power calculation using SRK/T and Barrett Universal II formulas for eyes with axial lengths between 22.0mm and 25.0mm using Tecnis ZCB00 lens.

Method: A retrospective study on patients undergoing cataract surgery at Pusat Pembedahan Karatak-MAIWP (PPKM-MAIWP) between 1st January 2017 and 30th June 2017.
Inclusion criteria: All uneventful phacoemulsification surgeries done with the IOL implanted in the bag. Exclusion criteria: any patients with previous ocular surgery and per-existing ocular disease.

Result: The Mean Absolute Error (MAE) for each eye will be calculated post-operatively and a comparison of the predicted refraction calculated with both formulas will be made. The data will then be analysed with SPSS.

Conculsion: Mean refractive prediction error for SRKT and Barret were 0.29 ± 0.22D and 0.39 ± 0.29D respectively. Hence, mean refractive prediction error for SRK/T was lower than Barrett showing that the SRK/T formula is more accurate in predicting lens power than Barrett Universal II formula.

106. Fungal Corneal Ulcer Progressing to Endophtalmitis: A Rare Case

Authors : Theresia Kania, Irvandi, Made Susiyanti
Institution : National Center Hospital Dr. Cipto Mangunkusumo

Background: Fungal keratitis is a less common type of keratitis. In tropical climate the incidence of fungal keratitis is relatively high, although it rarely progresses to endophthalmitis. The similarities in clinical presentation between keratitis and endophthalmitis pose a challenge to clinicians in diagnosing, despite early diagnosis and prompt treatments being crucial in preventing further complications.

Objective: to describe a rare case of endophthalmitis due to fungal corneal ulcer and its management.

Method: Case report

Result: A 70-year old man was admitted to National Center Hospital Dr. Cipto Mangunkusumo with chief complaint of discomfort in the left eye. Two months before admission, he had mechanical trauma in his left eye resulting in redness which turned into white spots, followed by impaired vision without pain in eye movement. His left eye visual acuity was 1/300 and

intra ocular pressure measured was 7mmHg. Physical examination showed palpebral edema, ciliary and conjunctival injection, corneal defect sized 1.4x2.4mm with feathery edge, cells(+3) and hypopion appearing in anterior chamber, opaque lens, and normal fundus. The outcome of KOH test was positive, whereas gram test showed negative result. Ultrasonography showed thickening of the choroid and debris in the vitreous, suggested endophtalmitis. He was treated with vitrectomy, antibiotics, intravitreal and oral antifungal. The day after treatments, the hypopion diminished and the size of defect was reduced.

Conculsion: Fungal corneal ulcer progressing to endophthalmitis is very rare. Immunological status and the presence of comorbid diseases in elderly could aggravate the disease. Prompt medical and surgical treatments resulted in better clinical outcome.

107. Iridocorneal Endothelial Syndrome with Secondary Glaucoma – A Case Report

Authors : Ooi Yong Lin, Aida Zairani Zahidin, Norshamsiah Md Din
Institution : Hospital Universiti Kebangsaan Malaysia

Objective: To report a case of iridocorneal endothelial syndrome presenting to UKMMC with secondary glaucoma.

Method: Retrospective case report.

Result: A 28 year-old Myanmar gentleman presented with complaints of left eye blurring of vision for the past 6 months which was gradually worsening. He started having left sided severe eye pain which was accompanied with left sided temporal headache around 2 months before presentation to our center. Due to the persistent pain, he sought treatment at KPJ hospital where he was prescribed with anti-glaucoma and steroid eyedrops. As his vision did not improve with the treatment given, he decided to come to UKMMC for second opinion. On examination of the left eye, vision was poor (hand movement) with a positive reverse RAPD. His left pupil was dilated at 7mm and peaked at 7 o'clock hours. He had cornea edema with an injected conjunctiva and minimal iris atrophy at 1 o'clock position. Anterior chamber was shallow with occasional cells and gonioscopy of the angle revealed shallow angle (Scheie grade I-II) with torn iris root from 5-7 o'clock which revealed the ciliary body. However, there was no iris nodules. The intraocular pressure was 60mmHg, fundus examination showed a pale disc with complete cupping. Intraocular pressure remained above 45mmHg with maximal treatment.

Conculsion: ICE syndrome is a unique and rare disorder which is challenging to treat.

108. Spontaneous Resolution of Multi-layer Retinal Hemorrhage in a Case of a Shaken Baby Syndrome

Authors : Ooi Yong Lin, Aida Zairani Zahidin, Mae-Lynn Catherine Bastion
Institution : Hospital Universiti Kebangsaan Malaysia

Objective: A case report of multi-layer retinal hemorrhage secondary to shaken baby syndrome with spontaneous resolution.

Method: Retrospective case report.

Result: A 4-year-old baby girl was admitted to UKMMC for status epilepticus secondary to bilateral subdural effusion. Patient was cared for by her babysitter and a history of baby rocker being used was given. Otherwise there was no other obvious history of trauma that may be the cause of the injuries sustained. Ophthalmological assessment revealed bilateral fresh multi-layer retinal hemorrhage (preretinal, intraretinal and subhyaloid) obscuring right fovea with evidence of fibrous bands at temporal retina bilaterally. Trans pars planar vitrectomy was planned for the right eye in fear of sensory amblyopia however it was cancelled as during follow up after 1 month it was noted that the hemorrhage was resolving and cleared from right fovea.

Conculsion: Ophthalmologists should weigh the pros and cons of early vitrectomy for retinal hemorrhage in a child as it may spontaneously resolve over time. This case also highlights the safety issues with the use of baby rocker.

109. Sphenoid Sinus Tumour in a Patient with Klippel-Trenaunay Syndrome

Authors : Deivanai Subbiah, Tan Cew Yong MS Ophtha, Nor'Ain Mohd Rawi MS Ophthal, Hanizasurana Hashim MS Ophthal
Institution : Hospital Selayang

Introduction: Klippel-Trenaunay syndrome (KTS) is a rare congenital, multisystem disorder characterised by a triad of cutaneous capillary malformation (port–wine stain), lymphatic anomalies, and abnormal veins in association with variable hypertrophy of soft tissue and bone. The incidence is about 1:100 000 with no predilection for gender, race or geographical area.

Objective: To report a case of sphenoid sinus tumor, mimicking carotid cavernous fistula in a patient with KTS.

Method: Case Report

Result: A 54 year old Malay man with underlying Diabetes Mellitus, Hypertension, End Stage Renal Failure and KTS presented with gradual onset, painless loss of vision over the left eye (LE) for 3 weeks associated with headache. His visual acuity was 6/24 on the right eye (RE) and no perception to light on the LE. Examination revealed presence of relative afferent pupillary defect and non-pulsatile axial proptosis in the LE. Extraocular movement and intraocular pressure of both eyes were normal. Telangiectatic conjunctival vessels were seen in the LE. Fundus examination showed proliferative diabetic retinopathy with central-involving macular edema in the RE and moderate non proliferative diabetic retinopathy in the LE. There was neither glaucomatous changes nor choroidal haemangioma seen. Computed tomography scan revealed left sphenoid sinus tumor highly suspicious of malignancy with infiltration of left optic nerve.

Conculsion: KTS is a group of phakomatoses which has multisystem tumors with possible malignant transformation. Hence, high index of suspicion must be made in KTS patient presenting with proptosis.

110. Visual and Refractive Outcomes in Patients With Astigmatism Following Toric Lens Implantation During Cataract Surgery in Hospital Tengku Ampuan Rahimah (HTAR), Klang

Authors : Lai Hui Lin, Indira Nadras, Fazilawati Qamarruddin
Institution : Hospital Tengku Ampuan Rahimah (HTAR), Klang

Objective: To audit visual and refractive outcomes following all cases of cataract surgery with toric lens implantation between January 2016 to October 2017 in HTAR,Klang

Method: A retrospective audit of 44 eyes of 36 patients with corneal astigmatism of more than 1.00 diopters (D), who had underwent cataract surgery with intraocular toric lens implantation were included in this audit. Postoperatively, uncorrected distance visual acuity (UDVA), corrected distance visual acuity (CDVA), and refractive outcome were measured within 12 weeks.

Result: Preoperatively, majority of the patient had vision worse than 6/60 (34.1%). The mean age were 63.3 years ±16.0SD and preoperative mean astigmatism were 2.55D ± 0.77SD (range 1.47D to 5.00D). The mean target cylinder were -0.01 ± 0.20SD and mean target spherical equivalent were -0.18 ± 0.19SD. The mean residual cylinder were -0.64 ± 0.51SD and mean spherical equivalent achieved were 0.09 ± 0.73SD.

Postoperatively, 34 (77.3%) of the eyes achieved an UDVA of 6/12 or better and 43 (97.7%) of the cases achieved a CDVA of 6/12 or better. Twenty-four eyes (54.5%) achieved the residual cylinder power within 0.5D and 61.4% of the eyes achieved spherical equivalent within +1.05D. No significant differences were found in refractive outcome when using optical method (IOL master) and immersion ultrasonography.

Conculsion: Toric intraocular lens allows the correction of corneal astigmatism besides providing good visual quality to the patients.

111. The Use of Toric Intraocular Lens; Results from "Pusat Pembedahan Katarak Hospital Selayang"

Authors : Wan Mohd Aiman Bin Wan Abdul Rahman, Solehah binti Jeffrey, Sivasangari, Rozila Ariff (Supervisor)
Institution : Hospital Selayang

Objective:
• To determine the visual outcomes postoperatively

•To determine the refractive astigmatism post operatively.

• To describe the cornea astigmatism pre and postoperatively

Method: Design: A retrospective study
50 patients between 20 and 70 years old with cataract and pre-existing regular corneal astigmatism equal or more than 1.0D was selected from database from November 2016 till June 2017. They were operated by a single ophthalmic surgeon using phacoemulsification.

The data collected was analyzed using SPSS version 16

Result: In this study 98% eyes achieved good visual outcome. 46% eyes does not require spectacles for far vision .
•In the eyes with cornea astigmatism < 1.5DC ,80 % shows reduction in the astigmatism. 40% eyes has residual astigmatism between -1DC to -1.5DC post operatively.
•In the eyes with cornea astigmatism > 1.5DC ,100% shows reduction in the astigmatism. 30% eyes has residual astigmatism between -1DC to -1.5DC post operatively.

Conculsion: Toric IOL is a useful surgical tool to reduce the refractive corneal astigmatism.

112. Traumatic Macular Hole in Young Patients : Case Reports

Authors : Saraswathy Ramasamy, Mushawiati Mustapha (MS Ophthal), Bastion MLC
Institution : Ophthalmology Department, UKM Medical Centre

Objective: To report 2 cases of traumatic macular hole in young patients with different approach.

Method: Retrospective case reports

Result:
Case 1
A 23 –year-old male presented with 3 days of right eye blurring of vision with central scotoma after hit by shuttlecock while playing badminton. On examination note visual acuity was 3/60 OD.Anterior segment was unremarkable. Fundus examination revealed vitreous haemorrhage and retinal haemorrhages inferiorly and full thickness macula hole with striations. Patient underwent 25 gauge vitrectomy and macular surgery at 2 weeks post trauma. At 1 month post-surgery, Oct macula showed closed macular hole and at 3/12 post surgery his best corrected visual acuity was 6/36 with posterior subcapsular cataract.

Case 2
An 11-year-old boy alleged that heavy debris fell on his right eye while watching a fireworks show two weeks prior to our evaluation. His visual acuity was 1/60 OD. Fundus examination revealed vitreous haemorrhage inferiorly and full thickness macula hole with striations and fibrosis which was confirmed on OCT macula. Initially it was observed for spontaneous closure. However, by 1 month, the persistence of the hole prompted plans for surgical intervention. He underwent pars plana vitrectomy and macula hole surgery.2 months after surgery, OCT showed closure of macula hole, however his vision remained poor.

Conculsion: Traumatic macular hole in young patients is not rare and spontaneous closure has been seen in many cases in this group. However studies showed that early vitrectomy has successfully treated macular hole with good visual outcome.

113. The Role of GUTT Atropine 0.01% in Treatment of Accommodative Spasms

Authors : Seow Shu Yee, Norina bt Abdul Gafor, Jamalia Rahmat, Sunder Ramasamy
Institution : Hospital Kuala Lumpur

Objective: To report the role of Gutt Atropine 0.01% in 3 cases of accommodative spasms with various underlying causative factor.
Method: Observational case report.

Result: Case 1 – An 11-year-old boy with a rigorous academic timetable and excessive near work presented with blurred vision and difficulty in concentrating with headaches for 3 months. The diagnosis of accommodative spasm was made following a binocular vision assessment. The patient was started on G. Atropine 0.01% once daily. Cycloplegic therapy was tailored accordingly and he recovered from his accommodative spasm.

Case 2 – A 29-year-old doctor with previous myopia who underwent recent Lasik correction complained of blurring of vision, periocular discomfort and headache on near work. A binocular vision assessment revealed convergence insufficiency with accommodative spasm. She was started on G. Atropine 0.01% once daily showing vast improvements in her symptoms.

Case 3 – 25-year-old man with history of excessive near work on computers complained of progressive episodes of blurring of vision, periocular pain, nausea and headaches for 3 years with history of frequent spectacle change. A binocular vision assessment showed accommodative spasm and G. Atropine 0.01% was prescribed for him. The patient showed progressive improvement and maintain complete resolution of accommodative spasm.

Conculsion: Accommodative spasm is an ocular disorder that has a vague presentation but greatly impacts patients' quality of life. Gutt Atropine 0.01% is an effective treatment for accommodative spasm, whilst minimizing the incidences and severity of adverse effects from cycloplegic therapy like pupillary dilatation, blurring of vision and glare.

114. WEBINO in Multiple Sclerosis: A Case Report

Authors : Woon Tian Qing, Navpreet KS, Raja Norliza RO
Institution : Department of Ophthalmology Hospital Melaka,
Pusat Perubatan Universiti Kebangsaan Malaysia

Objective: To report a case of wall-eyed bilateral internuclear ophthalmoplegia (WEBINO) as a first presentation of multiple sclerosis.

Method: Case Report-Subject Taken from Eye Clinic Hospital Melaka

Result: A 22-year-old Indonesian lady with no underlying illness complained of sudden onset of double vision for 1 day. Her vision was 6/12 pin hole 6/6 for both eyes. Neurologic examination revealed bilateral exotropia on primary gaze, adduction deficit in both eyes and horizontal nystagmus in contralateral eye while attempting adduction in the fellow eye. The anterior and posterior segments were otherwise unremarkable in both eyes. There was presence of cerebellar ataxia. The blood investigations were normal. MRI demonstrated features of multiple sclerosis with hyperintensity lesions over the periventicular, juxtacanicular, supratentorial regions involving the deep white matter and few similar lesion also in the

midbrain, pons, left occipital lobe, left thalamus and left cerebellum She was diagnosed as multiple sclerosis and started on intravenous methylprednisolone 1g OD for 3 days. The extraocular movement recovered fully after treatment.

Conculsion: WEBINO is a rare presentation and it can occur with lesions at different level of the brain stem. A diagnosis of multiple sclerosis should be suspected and confirmed by neuroimaging study.

115. Osteopetrosis – A Rare Cause of Bilateral Compressive Optic Neuropathy and Facial Nerve Palsy

Authors : Loke Jee Yao, Muzaliha Mohamed Nor, Haslina Mohd Ali
Institution : Hospital Sultanah Bahiyah

Objective: Bilateral compressive optic neuropathy and facial nerve palsy are rare complications of osteopetrosis.

Method: Case report.

Result: A 10-year-old girl with underlying osteopetrosis presented with left facial nerve palsy and bilateral optic neuropathy initially. Her right eye vision was 6/18 and left eye vision was 6/6. Optic discs were swollen and pallish bilaterally. Optic nerve function tests were impaired bilaterally with right sided visual field constriction. She was also having left lower motor neurone facial nerve palsy. Computed Tomography scan demonstrated an abnormally densed skull bones with bilateral narrowed optic canals and left facial canal. Magnetic resonance imaging showed slightly enlarged right optic nerve. No sign of raised intracranial pressure. Infective screening was negative.

Conculsion: Osteopetrosis can cause optic nerve compression in the bony optic canal. Awareness about this condition could guide the clinician to measures prevent permanent visual loss.

116. Relapse of Acute Lymphoblastic Leukemia Presenting as an Isolated Infiltrative Optic Neuropathy

Authors : Ng Chun Wai (MD), Fatimah Suhaila(MS Opthal (UKM),
Akmal Haliza (MS Opthal(UM)
Institution : Hospital Tengku Ampuan Afzan

Objective: We report a case of relapse of acute lymphoblastic leukemia presenting as isolated infiltrative optic neuropathy with optic neuritis.She was successfully co-managed together with Haematology team Hospital Kuantan.

Method: Interventional case report

Result: We report a case of 60 years old underlying acute lymphoblastic leukemia presented with right eye loss of vision and eye pain for 1 week.There is no other constituitional symptoms. Ocular examination revealed right eye visual acuity of 3/60 with postive relative afferent pupilary defect and left eye 6/7.5. Fundus of right eye showed hyperemic optic disc sweling with infiltration and splinter haemorrhage . Full blood count showed pancytopenia.

However CT orbit revealed thickened right intraorbital optic nerve suggestive of right optic neuritis. Patient was refered to Heamatology team for relapse of acute lymphoblastic leukemia. Lumbar puncture was performed and intrathecal metrotrexate was given. Lumbar puncture result demostrated high white cell count and high lymphocyte count. Intravenous methylprednisolone 250mg qid dose was started for 3 days followed by oral prednisolone for 11 days. Patient right eye vision improved dramatically to best corrected vision of 6/9 post treatment. Patient was further planned for bone marrow examination,regular intrathecal metrotrexate and radiotherapy.

Conculsion: Leukemic infiltration of the optic nerve is rare. It can mimic optic neuritis features. Early recognition and prompt treatment can improve visual outcome and long-term survival rate.

117. I Was Recently Diagnosed With SLE and Now I'm Blind! - A Case Report

Authors : Nur Faizah Binti Harun, S Premala Devi, Pushpa A/P Raman, Khairul Husnaini Mohd Khalid
Institution : Hospital Tuanku Ampuan Najihah

Objective: To highlight a case of Systemic Lupus Erythematosus (SLE) refractory to steroid therapy presenting as bilateral progressive SLE retinal vasculitis.

Method: Case report.

Result: A 34-year-old Indian female presented with sudden left painless blurring of vision for 1 month duration. Systemically she also had photosensitivity, joint pains, and generalised discoid like skin lesions. Ocular examination showed right visual acuity of 5/60 and left vision of hand movement. Bilateral anterior segment examinations were normal. Left fundus showed areas of sclerosed vessels, cotton wool spots at posterior pole, flame shaped hemorrhages and vitreous hemorrhage (VH) consistent with retinal vasculitis. Right fundus examination was normal. Patient was tested positive for antinuclear antibody (ANA) and skin biopsy showed lichenoid dermatitis with possible vasculitis, consistent with cutaneous lupus erythematosus. Patient was started on oral steroids for SLE. Left pan retinal photocoagulation was given. Her vasculitis responded poorly to steroid. While on treatment, she developed right total VH and left total retinal detachment. She also developed lower limb peripheral vasculitis associated digital gangrene. Subsequently she was treated with IIoprost and since then patient has been stable.

Conculsion: Retinal vasculitis due to SLE is severely sight threatening and lead to blindness. Rapidly progressive retinal manifestation may reflect inadequate control of systemic inflammation. Early treatment and close follow up is needed to prevent disease progression.

118. Out of the Bag: What Could it be?

Authors : Rebecca Jennifer Mary Louis, Rohanah Binti Alias, Rosilah Mohamad, Tan Shao Sze
Institution : Hospital Kuala Lumpur

Objective: To report a case of spontaneous anterior dislocation of crystalline lens, clinical findings and the subsequent management

Method: Case report

Result: A 45-year old man with underlying diabetes mellitus, hypertension and end stage renal failure presented with sudden blurring of vision with redness of the right eye. There were no trauma prior to the complaint. Denies history of similar complain in family.
The right eye visual acuity was hand movement. On anterior segment examination, the conjunctiva was injected and the anterior edge of the crystalline lens was in the anterior chamber and in contact with the endothelium. The intraocular pressure (IOP) was about 40mmHg.
He was then treated with Tab Diamox, Gutt Alphagan TDS, Gutt Xalatan ON, Gutt Maxidex two hourly. He was planned for intracapsular cataract extraction (ICCE) the next day. Intraoperatively, anterior vitrectomy was done along with peripheral iridotomy. Patient was left aphakic. Drops were all continued and Gutt Vigamox two hourly was added. Postoperatively, patient had Descemet' striae with opacity on endothelium with IOP of 12. His vision was still hand movement. The cornea became clearer after 2 months and antiglaucoma discontinued. Refraction done and best corrected vision was 6/120. He is planned for secondary IOL implantation later.

Conculsion: Case of spontaneous anterior dislocation of lens is rare and needs immediate intervention to prevent cornea and high IOP complications.

119. Povidone-Iodine Dabbing :As an Adjuctive Therapy for Infective Keratitis

Authors : Ng Chun Wai (MD), Ahmad Fahmi (IIUM), Fatimah Suhaila(MS Opthal(UKM)
Institution : Department of Ophthalmology HTAA , Department of Ophthalmology IIUM, Department of Ophthalmology UKM

Objective: To report the outcome of a case series of infective keratitis patient treated with adjuctive povidone-iodine dabbing(0.5 % iodine).

Method: Retrospective case series.

Result: Case 1: 12 years old,underlying vernal keratoconjuctivitis presented with bilateral eye limbitis with left eye nasal infective keratitis measuring 1mm.Her right eye visual acuity of 6/6 and left eye visual acuity of 6/12.Her left eye was started on gutt fortum 5% and fortified gentamycin 0.9 % with adjuctive povidone-iodine dabbing(0.5 % iodine) daily. There is complete epithelization within 1 week of treatment

Case 2: 46 years old man,underlying diabetes and ESRF presented with left eye infective keratitis measuring 2.6mm x 1.2 mm.His right eye visual acuity was 6/9 and left eye was 3/60.His left eye was started on gutt fortum 5% and fortified gentamycin 0.9 % with adjuctive povidone-iodine dabbing(0.5 % iodine) daily. Complete epithelization occured after 2 week of treatment.Patient left eye visual acuity improved to 6/36

Case 3: 47 years old presented with left eye fungal keratitis measuring 3.2mm x 3.6mm after alleged hit by palm oil fruit.His right eye visual acuity was 6/9 and left eye was 6/15 . His left eye was started on gutt fortum 5% ,fortified gentamycin 0.9 % and gutt amphotericin b 0.25% with adjuctive povidone-iodine dabbing(0.5 % iodine) daily. Stromal infiltration and epithelial defect healed within a month.Patient left eye visual acuity improved to 6/6

Conclusion: Povidone-iodine is an readily available broad-spectrum antimicrobial agent which is effective for corneal ulcers and can fasten the cornea healing time.

120. Waiting Time for Cataract Surgery in Patients Blinded by Cataract in Hospital Melaka

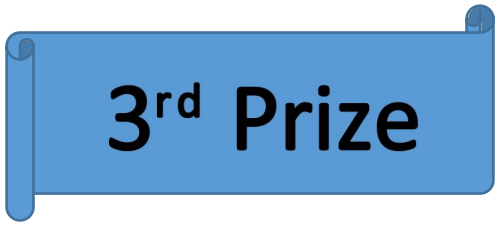
Authors : Logeswari Krishna, Noorlaila Baharuddin, Norfadzillah Abdul Jalil, Raja Norliza Raja Omar
Institution : Hospital Melaka

Objective: To determine the waiting time for cataract surgery in patients who are blind due to cataract.

Method: Retrospective study of waiting time for cataract surgery in patients who had visual acuity of 3/60 or worse in both eye due to cataract in the year 2017 in Hospital Melaka.

Result: Patients who had visual acuity of 3/60 or worse in both eye, who underwent cataract surgery in the year 2017 were identified from the National Eye Database. Patients who had other ocular problems such as advanced diabetic eye disease, advanced glaucoma, macula scar were excluded. Patients with cataract causing the above visual acuity and those in whom posterior segment cannot be assessed due to cataract were included. Waiting time were calculated from the date the patient was medically fit for cataract surgery to the date of surgery for the first eye. Eighty two patients were included in this study. The most common age group was more than 70 years old (40%). The waiting time ranges from 1 day to 64 days. Twenty percents of patients had their surgery done within two weeks. Most patients had their cataract surgery done within one month (41.4%). The rest were within two months.

Conclusion: The waiting time for cataract surgery for the first eye in patients blinded due to cataract was not longer than two months in Hospital Melaka.



121. Role of Visual Field Reliability Indices in Detecting Glaucoma Progression

Authors : Yeap Khy Ching, Khairul Husnaini Mohd Khalid, Premala Devi-S, Puspha R
Institution : Hospital Tuanku Ampuan Najihah

Objective: To evaluate the impact of false-positive error (FP), false-negative error (FN) and fixation loss (FL) of visual field (VF) reliability indices in detecting glaucoma progression.

Method: This is a retrospective study on 420 VFs taken from 84 eyes of 44 subjects from Hospital Kuala Pilah. All patients have objective structural glaucoma progression. The VFs were obtained with the HFA II (Carl Zeiss Medical Technologies Inc., Dublin, CA) using 24-2 SITA protocol. No eyes or VFs were excluded because of poor reliability indices. Visual field

progression was determined using trend-based criteria: rates of MD change significantly faster than zero. Logistic regression models were used to evaluate the associations between reliability indices and false negative detection of glaucoma progression on VF.

Result: Median FL, FP error, and FN error rates were 18.6%, 1.3%, and 9.6%, respectively. There were 33 patients with more than 3 reliable VF results (FL <20% and FP error response rate <15%). The VF progression was seen in 57 eyes (78%). Twenty-seven eyes with structural progression were not detected by visual field. Probability false negative detection of glaucoma progression in VF was associated with increased FP (odds ratio [OR], 1.36; 95%CI, 1.11-2.78, P<0.005) but did not appear to be associated with FLs (OR, 0.78; 95%CI, 0.90-2.03, P =0.30) or FN (OR, 0.54; 95%CI, 0.44-3.12, P = 0.64).

Conculsion: FN error and FL have little impact in detecting visual field progression in established glaucoma. FP error significantly affects the reliability of the VF and delays the detection of glaucoma progression.

122. ANCA-Associated Scleritis: "When a Red Eye Raises a Red Flag"

Authors : Sulochana Mohan, Khairul Husnaini Mohd Khalid, Premala Devi-S, Puspha R
Institution : Hospital Tuanku Ampuan Najihah

Objective: To report a case of ocular manifestation of ANCA-associated vasculitis

Method: Case report

Result: A 68-year-old male presented with bilateral blurring of vision associated with pain and redness for 1 week duration. Initially, his ocular condition was temporarily relieved with a course of corticosteroid eye drops, on presumptive diagnosis of conjunctivitis. He had no systemic manifestations. On ocular examination, bilateral visual acuity was 6/18. Anterior segment examination showed diffuse anterior scleritis, and limbitis which later rapidly progressed to peripheral ulcerative keratitis. Fundus examination findings were normal and B-scan ultrasonography showed no T-sign. Systemic examinations were normal. Patient was tested positive for ANCA. Urine examination showed proteinuria which was consistent with glomerulonephritis. Since patient did not have any pulmonary findings which makes Wegener's a more definitive diagnosis, a diagnosis of ANCA related vasculitis was made and patient was treated with a combination of oral steroid and Azathioprine. Patient responded well and is currently stable.

Conculsion: ANCA associated vasculitis can have atypical ocular presentation and can be clinically misdiagnosed as conjunctivitis or other forms or scleritis or episcleritis. The long term visual and systemic prognosis is good with early detection and prompt immunosuppressive treatment.

123. Endogenous Fungal Endophthalmitis in a Post Partum Patient

Authors : Lai Hui Lin, Gaayathri Nadarajah, Fazilawati Qamarruddin
Institution : Hospital Tengku Ampuan Rahimah (HTAR), Klang

Objective: To report a rare case of post partum endogenous fungal endophthalmitis

Method: A 33 year old, with a history of poorly controlled gestational diabetis mellitus (GDM), presented to eye clinic with complaints of right eye pain, redness and reduce vision for 5 days. She had a intrauterine death at 36 weeks of gestation, 11 days prior to her presentation. Upon examinations, relative afferent pupillary defect (RAPD) was negative. Anterior segment examination showed a mildly injected conjunctiva with anterior chamber cells of 4+. There was vitritis of 2+ with multiple whitish, fluffy round lesions inferiorly resembling a string of pearls. The optic disc was swollen, with a well defined creamy colored chorioretinal lesion at the fovea. Obstetric and gynaecology review and a full systemic work up did not reveal a fungal foci. Right eye intravitreal tapping, antibacteria and antifungal was given on the same day. Patient was admitted for intensive topical and systemic antifungal medications. Intravitreal culture and sensitivity was positive for candida species. She was referred to Hospital Selayang where a vitrectomy and temponade procedure was done.

Result: Awareness of possible endogenous fungal endophthalmitis following spontaneous normal delivery can help initiate early treatment.

Conculsion: Postpartum endogenous fungal endophthalmitis is a rare condition. Candida albicans is part of the normal flora of the respiratory, gastrointestinal tract and female genital tract. Following delivery, trauma to the birth canal will cause this pathogen to be disseminated systematically. Recognition of high risk patients, helps to initiate early treatment and secure good visual outcome.

124. Canine Inflicted Ocular Trauma: A Case Series

Authors : Zulhisham Bin Mohmad, Jessica Mani A/P Penny Tevaraj, Shuaibah Ab Ghani
Institution : Hospital Wanita & Kanak-Kanak Sabah

Objective: Dog bites in children usually involves head, neck and face. It is estimated that children are 4 times more likely to get ocular injuries from dog bites than adult. This can potentially lead to adverse outcomes. Our objective is to report a case series of ocular trauma caused by dog attacks in children in Sabah.

Method: We reviewed a case series of four children who had ocular injuries from dog attacks between the year 2015 to 2017 that presented to Hospital Wanita & Kanak-Kanak Sabah.

Result: The children were between 1 to 4 years old. These children were attacked by either their own or relative's pet. Of these four dogs, one was vaccinated, one was not and the other two had unknown status. There were no eye-witness for three of the cases. All cases were given anti-tetanus toxoid injection. All children suffered lid lacerations and required admission and lid surgeries. Moreover, there were also deep extraocular lacerations over the face and neck. The surgery of three of the cases were done within 24 hours. One patient had nasolacrimal duct obstruction from the complication of injury and required additional surgery.

There were no open globe injuries. All children were treated with IV antibiotics and none had complications from infection. They have visual outcome of 6/12 or better.

Conculsion: Dog attacks are not uncommon. Parents should be aware that even their own pets can attack their young children, and should monitor them. Hence, parents' awareness plays a vital role in preventing further attacks.

125. Miller Fisher Syndrome Variant: The Incomplete Trio

Authors : Noorhayati Binti Mohamad Nadzir, Premala Devi-S, Pushpa R, Khairul Husnaini Mohd Khalid
Institution : Department of Ophthalmology Hospital Tampin

Objective: To report a rare case of Miller Fisher Syndrome (MFS) variant with ophthalmoplegia, ataxia and hyperreflexia.

Method: Case Report.

Result: Miller Fisher Syndrome (MFS) is a rare inflammatory neuropathy where diagnosis is made based on the clinical triad of ophthalmoplegia, ataxia and areflexia. It is considered as a variant of Guillain-Barré syndrome (GBS) and associated with antiGQ1b IgG positive serology. However there have been limited reports on atypical forms of MFS with incomplete triad. Here is a case of a healthy 39-year-old woman who presented with acute ophthalmoplegia, diplopia, severe headache and ataxia following an upper respiratory tract infection a week prior. She exhibited bilateral ophthalmoplegia, ataxia but also had hypereflexia and other rare signs such as pupillary areflexia, nystagmus, absence of ocular somatic reflexes (vestibulo-ocular reflex, optokinetic nystagmus and Bells reflex) which were causing barriers to diagnosis. Neuroimaging and blood results were unremarkable. A diagnosis of Miller Fisher variant, with possible overlap of Bickerstaff Brainstem encephalitis was made based on clinical findings and positive antiGQ1b IgG. Patient was managed conservatively. No intravenous immunoglobulin was given but the patient gradually improved in symptoms. Her ataxia resolved but ophthalmoplegia prevails at 2 weeks follow up in clinic.

Conculsion: The patient had evidence of both central (drowsiness, headache, hypereflexia) as well as peripheral nerve involvement (ophthalmoplegia and absent ocular somatic reflexes) associated with antiGQ1b antibodies. This case represents an example of a patient who had features of both Miller Fisher syndrome and Bickerstaff brainstem encephalitis, suggesting that these two disorders form a continuous spectrum.

126. "Bleeding" Phacoemulsification - A Case Report

Authors : Nurhafis Bin Zainol, Premala Devi-S, Pushpa R, Khairul Husnaini Mohd Khalid
Institution : Department of Ophthalmology Hospital Tampin

Objective: To highlight a rare case of suprachoroidal hemorrhage during phacoemulsification in bilateral carotid carvenous fistula (CCF).

Method: Case report.

Result: A 76-year-old female with underlying hypertension presented with left mature cataract. Her initial preoperative assessment was uneventful and she underwent phacoemulsification. During epinucleus removal, there was sudden, unexpected anterior chamber shallowing, resulting in posterior capsule rupture. While the wound was extended to facilitate epinucleus removal, there was further decrease of red reflex, followed by hardening of the globe indicating a suprachoroidal hemorrhage. Wound was opposed swiftly without intraocular lens. Further evaluation thereafter revealed patient had chronic headache for several years and further ocular examination showed esophoria. A computed tomography (CT) demonstrated features suggestive of bilateral CCF which was confirmed with CT angiography. However, patient refused further intervention.

Conculsion: Patients with CCF have elevated episcleral venous pressure and this subsequently raises the intraocular pressure. Sudden decompression of the globe in these patients predispose them to higher risk of suprachoroidal hemorrhage although this condition is generally rare in phacoemulsification. Therefore, sudden unexplained shallowing of anterior chamber during phacoemulsification should raise a red flag of possible suprachoroidal hemorrhage and early measures should be taken to address this complication effectively in order to optimize final visual outcome.

127. Current Trends in Newly Referred Patients With Diabetic Retinopathy at Hospital Tuanku Ja'afar Seremban

Authors : Sharan A/P Silvarajoo, Punithamalar V, Hemalatha C, Norlelawati A
Institution : Hospital Tuanku Jaafar Seremban

Objective: To analyse the current trend in newly referred patients with diabetic retinopathy and the risk factors

Method: Retrospective analysis of medical record of newly referred patients for diabetic retinopathy at HTJS in 2017

Result: A total of 194 patients' medical record were analysed. There were 106 females (54.6%) and 88 males (45.4%). The mean age at presentation was 54 years. There was 109 Malay (56.2%), 61 Indian (31.4%) and 24 Chinese (12.4%) patients. The mean duration of diabetes mellitus is 9 years. 39 patients had no diabetic retinopathy (20.1%). 32 had mild NPDR (16.5%), 45 had moderate NPDR (23.3%), 21 had severe NPDR (10.8%), 46 had PDR (23.7%) and 11 had ADED (5.7%). Diabetic maculopathy was seen in 81 patients (41.8%). The group of patients with severe NPDR, PDR and ADED were younger with mean age of 50 (p= 0.001) compare to those with mild to moderate NPDR.

Conculsion: Active and diligent screening of young diabetics for diabetic retinopathy is mandatory to prevent blindness in them.

128. An Audit on the Refractive Outcome of Multifocal Intraocular Lens (IOL) in Hospital Tengku Ampuan Rahimah

Authors : Melinder K Bhupinder, Indira Nadras, Fazilawati Q
Institution : Hospital Tengku Ampuan Rahimah (HTAR), Klang

Objective: To audit the refractive outcome of multifocal IOL implantation in cataract patients from January 2017 till October 2017

Method: Refractive outcome of uncomplicated cataract surgery with multifocal IOL implantation were audited. Preoperatively, systemic co-morbidity, ocular co-morbidity and visual acquity were recorded. The distance and near visual acquity and the spherical equivalence were assessed within 3 months post operatively. Statistical analysis was performed with SPSS 2.0.

Result: A total of 128 eyes of 102 patients were analysed. Only 118 eyes with complete follow up data were included for the audit. Preoperatively, 17% of the eyes had unaided vision in blindness category (<3/60). About 12.7% of the eyes had ocular co-morbidity such as diabetic retinopathy and glaucoma. Postoperatively, 85.6% of eyes had post op unaided distance visual acuity of ≥6/12. With refraction, 98.3% of eyes achieved post op vision ≥6/12. For near vision, 82.1% of eyes had unaided vision of ≥N6 while with refraction, 94.1% of eyes achieved aided near vision of ≥N6. The mean target spherical equivalence is -0.002 ± SD 0.203. Mean spherical equivalent achieved was -0.131 ± SD 0.622. Mean predicted refractive error was 0.129 ± SD 0.637. About 68.6% of the eye achieved a spherical equivalent refractive outcome within ± 0.5D of the target spherical equivalent and 89.8% of eye achieved spherical equivalent outcome within ± 1D of the target spherical equivalent.

Conculsion: This audit shows a fairly good proportion of patients with good distance and near visual outcome and spherical equivalence outcome.

129. Adult Onset Myopia, Axial Length, and Age Related Cataract: The Hospital Kuala Pilah Cluster Study

Authors : Mohd Khairrudin Bin Mohd Sobri, Puspha, Premala Devi, Khairul Husnaini
Institution : Hospital Tampin

Objective: To investigate the relationship between axial length, adult onset myopia and the age related cataract in suburban population

Method: This is a cross sectional study of 139 patients with adult onset myopia presented to Hospital Tampin from November 2015 to December 2017.Adult-onset myopia was defined as having the first spectacle correction at the age of 18 years or older. Myopia was defined as spherical equivalent worse than or equal to −0.50D. Patient's age, axial length, spherical equivalent, ocular biometry and the subtypes and severity of cataract were recorded and analyzed.

Result: The mean age of our study patients is 67.8 year(50-92). The mean axial length is 23.50mm. Mean value of anterior chamber depth(ACD) is 3.15mm, lens thickness(LT)is 4.57mm, K-reading is 45.02D and the corneal astigmatism -0.2. Average spherical equivalence(SE) -2.14, showing that most of our patients have low myopia. Corneal radius(CR) mean value is 7.51mm and AL/CR ratio is 3.13.Axial length increases as myopia increase, but this correlation is not statistically significant and there is also no significant association between AL/CR ratio and SE.
In multivariate analysis, myopia was associated with an increase prevalence of nuclear

sclerosis cataract(OR: 2.2, CI: 1.1-3.5) and PSC cataract(OR: 1.2, CI:1.01-.5), but cortical cataract is insignificant. Axial length is not associated with any subtypes of cataract.

Conculsion: Our study shows that adult onset myopia is associated with nuclear sclerosis and PSCC. This result supports the notion of index myopia being more prevalent than axial or curvature myopia in our suburban population.

130. Serum Leptin and Age-Related Macular Degeneration

Authors : Sudarshan Seshasai, Gemmy Chui Ming Cheung, Tien Yin Wong, Charumathi Sabanayagam
Institution : Singapore National Eye Centre

Method: We conducted a population-based case-control study including Chinese and Indian adults aged 40 to 80 years who participated in the Singapore Epidemiology of Eye Diseases Study (2007–2011). Age-related macular degeneration was assessed from retinal photographs graded using a modified Wisconsin Age-Related Maculopathy Grading System (n = 426; early = 389, late = 37). Controls (n = 927) without AMD were frequency matched for age, sex, and ethnicity. Serum leptin levels were measured using direct sandwich ELISA.

Result: Participants with AMD had lower levels of leptin compared with those without (mean [SD] = 10.0 [11.5] ng/mL versus 12.9 [16.4] ng/mL; P = 0.001). Mean levels of leptin among those with late, early, and without AMD were 8.8, 10.1, and 12.9 ng/mL (P trend = 0.005). In multivariable models adjusting for potential confounders, including smoking, body mass index, blood pressure, and high-density lipoprotein cholesterol, increasing quartiles of leptin were associated with lower odds of AMD, odds ratio (95% confidence interval) of AMD was 0.56 (0.34–0.92) comparing highest to lowest quartile of serum leptin. In subgroup analyses, the inverse association between leptin and AMD was significant in women, Indian ethnicity, and ex-smokers.

Conculsion: Higher serum leptin levels were inversely associated with AMD. These findings, if confirmed in prospective studies, may provide insights into new pathogenic pathways and possibly therapeutic targets in AMD.

131. When Lightning Strikes: A New Ocular Finding

Authors : Kelvin Chong HN, LM Tan, Intan Gudom
Institution : Sarawak General Hospital

Objective: To report a case of ocular electrical injury secondary to lightning strike.

Method: Case report.

Result: A 35-year-old man was struck by lightning while fishing in the rain. Consequently, he sustained a brief loss of consciousness and localised 2nd degree burns to his right face, anterior chest and left loin. On examination, his best corrected visual acuity was 6/24 over the right eye (RE), and 6/6 in the left eye (LE). Slit lamp biomicroscopy of RE showed conjunctival chemosis and a diffusely hazy cornea with a central epithelial defect. Examination of the LE was normal. He was treated with topical steroids, antibiotics and lubricants. Two days later,

the epithelial defect healed and there was RE iritis and anisocoria (RE > LE) due to multiple sphincteric tears. There was, however, no lightning-induced cataract and the retina was normal. Five days post trauma, multiple small, pinpoint endothelial opacities were seen over the superior half of the cornea in the RE. LE examination remained unremarkable.

Conculsion: The incidence of lightning strike cases are relatively rare. As such, the full sequelae of ocular injuries secondary to lightning strike remains to be seen. The most common presentation on the cornea are epithelial erosions. Herein, we would like to report a new corneal endothelial finding secondary to lightning electrical injury.

132. Eight-and-a-Half Syndrome: A Rare Neuro-Ophthalmic Sequelae Of Pontine Infract

Authors : Ang Wen Jeat, Farah Binti Abu Bakar, Prof Wan Hazabbah Wan Hitam, Prof Madya Zunaina Embong
Institution : Universiti Sains Malaysia

Objective: To report an unusual case of eight and a half syndrome after a pontine infract.

Method: Case report.

Result: "Eight-and-a-half" syndrome is a unusual neuro-ophthalmic clinical entity which comprised of "one-and-a-half" syndrome (conjugated horizontal gaze palsy and internuclear ophthalmoplegia) with ipsilateral fascicular cranial nerve seventh palsy. This condition, particularly when isolated, is caused by circumscribed lesions of the pontine tegmentum involving the abducens nucleus, the ipsilateral medial longitudinal fasciculus, and the adjacent facial colliculus. Here, we report a 54-year-old man who presented with left gaze limitation and right eye limitation of adduction with horizontal nystagmus on abduction (one-and-a-half syndrome) in addition to a left-sided lower motor neuron facial nerve palsy. Brain computed tomography scan revealed a hypodensity area located in the left hemipons.

Conculsion: Our patient presented with the unique combination of left sided horizontal one-and-a-half syndrome and lower motor neuron seventh cranial nerve palsy. Such a combination of signs (seven plus one-and-a-half) is known as eight-and-a-half syndrome. Recognition of the spectrum of eight-and-a-half syndrome allows precise anatomic localization of the lesion to pontine tegmentum region.

133. An Unusual Case of Presumed Endophtalmitis Secondary to Conjuctivitis Abscess

Authors : Nur Atiqah Binti Hasan, LM Tan, G. Intan
Institution : Sarawak General Hospital

Objective: To report an unusual case of presumed endophthalmitis secondary to conjunctival abscess.

Method: Case report.

Result: A 73-year-old Chinese man with no comorbidities presented with a 4-day history of painful left eye (LE) redness, swelling and sticky discharge with a visual acuity (VA) of light

perception. There was no worsening of vision because the LE had poor vision ever since he underwent vitreoretinal surgery with silicone oil (SO) endotamponade in 2003 for retinal detachment. He also had an uneventful cataract surgery in 2015. Ocular examination revealed LE blepharitis and chemosis with a diffusely hazy cornea. Anterior chamber cells were present with a hypopyon level. B scan ultrasonography only showed a SO-filled eye. VA in the right eye was 6/9 and ocular examination was normal.
Empirical treatment with systemic and intravitreal antibiotics was commenced immediately after aqueous and blood samples were taken for culture. Cultures and endogenous endophthalmitis workup, however, did not yield any results.
Fortunately, the LE responded well to treatment and the reduction of chemosis allowed us to visualise an inferotemporal conjunctival abscess which was drained immediately. After drainage, further improvement of the LE was seen.

Conclusion: Endophthalmitis in a SO-filled eye is rare thus an endogenous cause needs to be excluded. A case of conjunctival abscess causing endophthalmitis has never been reported previously. This is further supported by the location of the abscess which is at the infusion site for vitrectomy.

134. Reversible Blindness in Pregnancy

Authors : Sangeetha A/P Manoharan, Rozita Ismail, Rosniza Ab Razak
Institution : Hopital Serdang

Objective: To report a case of blindness in pregnancy and the prompt management in reversing the blindness.

Method: Case report.

Result: Cortical blindness is a rare complication of pre-eclampsia. However the precise nature of the pathogenesis of this condition has not been understood. In this report , we present the clinical evolution of a pregnant woman in her 35 weeks of her pregnancy developing severe pre eclampsia complicated with temporary blindness. On examination, examination visual acuity was no perception to light bilaterally and RAPD was negative. Anterior segment and fundus examination of the eyes were unremarkable. Her visual acuity was restored by fifth day after giving antihypertensives, seizure prophylaxis and operative delivery. She was diagnosed with of posterior reversible encephalopathy syndrome(PRES). CECT brain revealed the typical feature of ill defined hypo attenuating areas at bilateral posterior high parietal and bilateral occipital regions. Although PRES has been described as a puerperal clinicoradiological entity, it may be seen during pre-eclampsia and eclampsia patients during pregnancy. In view of that neuroimaging studies should be carried out in pregnant patients with visual disturbance to exclude PRES.
Conclusion: PRES is a reversible cause of blindness. Hence, in such conditions prompt suspicion and management in preventing short- and long-term neurological deficits is important.

Keywords:PRES, pregnant, preeclampsia, cortical blindness, Magnesium sulphate

135. Post-Partum Optic Neuritis

Authors : Siti Amirah Binti Hassan, Arwinderjit Kaur, Norlaila Taib
Institution : Hopital Serdang

Objective: To report a rare case of post-partum optic neuritis

Method: Case report

Result: 42 year-old, malay, lady, 2 months post-partum, no co-morbid, presented with first episode of worsening bilateral blurring of vision for 2 weeks associated with bilateral lower limbs weakness for 4 days and urinary incontinence for 1 day. Examination showed that the vision for both eyes was light perception with sluggish pupils. Fundus revealed bilateral optic disc swelling with peripapillary haemorrhages. Magnetic resonance imaging of brain and spine showed C3 to L3 long segment transverse myelitis with right parietal subcortical white matter and right internal capsule and thalamus enhancing lesions. Patient was started on intravenous methylprednisolone 250mg QID for 3 days followed by tablet prednisolone 1g/kg/day for 11 days. Her vision was slightly improved to hand movement and she was referred to neuromedical for plasmapharesis.

Conclusion: Post-partum is the critical period for precipitation of demyelinating disease even though the differential diagnosis of optic neuritis is varied.

136. One-year Outcome of Retinopathy of Prematurity Treated with Combination Laser and Intravitreal Ranibizumab - A HUSM Experience

Authors : Lim Zi Di, Evelyn Tai Li Min, Zunaina Embong, Shatriah Ismail
Institution : Hospital University Sains Malaysia

Objective: We aimed to describe the outcome of eyes with threshold ROP treated with combined laser photocoagulation and intravitreal ranibizumab in Hospital Universit Sains Malaysia (HUSM).

Method: This was a retrospective case series of four eyes with threshold ROP treated with a combination of laser photocoagulation and intravitreal ranibizumab

Result: The gestational age ranged from 26 to 32 weeks, while the age at diagnosis of ROP was approximately 35 weeks period of gestation. Upon diagnosis, all eyes were given one session of combined laser photocoagulation and intravitreal ranibizumab, delivered in the same setting. No further laser or intravitreal injections were required. Signs of ROP regression were observed within a fortnight of treatment; however, even up to six months post-treatment, retinal hemorrhages persisted. One eye developed ROP recurrence. No ocular side effects of intravitreal ranibizumab were noted. Pre-existing comorbidities associated with prematurity were present in all infants; no additional systemic complications were observed.

Conclusion: We observed good clinical response in our series of ROP treated with combination laser photocoagulation and intravitreal ranibizumab. However, retinal hemorrhages may persist despite ROP regression. Post-treatment recurrence remains a risk.

137. A Pair of Twins with Dissimilar ROP

Authors : Lim Zi Di, Evelyn Tai Li Min, Zunaina Embong, Shatriah Ismail
Institution : Hospital University Sains Malaysia

Objective: To describe retinopathy of prematurity development in a twin pair

Method: Case report of a premature twin pair with dissimilar ROP

Result: A set of twins was delivered at 32 weeks 4 days period of gestation (POG) via Caesarean section. Twin 1 had a birth weight of 1.45kg, was ventilated for 55 days for respiratory distress syndrome, and had concomitant nosocomial sepsis, anemia, hypoglycemia, as well as a large patent ductus arteriosus, for which surgery was performed at the 6th week of life. Weight gain was poor, with only 130 grams gained over the first 4 weeks of life. ROP was diagnosed at 36 weeks 2 days POG (right eye stage 3 zone 1, left eye stage 3 zone 2). Bilateral laser pan retinal photocoagulation and intravitreal lucentis were performed, after which the ROP regressed. Unfortunately, one eye later progressed to stage4b, and was treated with intraorbital triamcinolone. Conversely, twin 2, who never developed ROP, had a birth weight of 1.65kg, did not require supplemental oxygen, and had significantly greater weight gain (730 g over the first4 weeks of life). Although there was presence of tetralogy of Fallot, surgical intervention was deferred as the condition was asymptomatic. Besides neonatal jaundice, there were no other comorbidities.

Conclusion: Management of dissimilar ROP presentation among twins is challenging. Screening should be done in a timely manner. Prompt treatment may reduce the devastating complications of ROP.

138. Poor Prognosis Post-Traumatic Endophthalmitis with Surprise Outcome - A Case Report

Authors : Khairil Ridzwan Kamalul Khusus, Prof Shatriah Ismail,
Norlelawati Zainol, Zabri Kamarudin
Institution : Hospital Selayang

Objective: To study the outcome of early intervention of post vitrectomy in patient post-traumatic endophthalmitis with penetrating injury.

Method: Case report

Result: A 11years old, boy presented with sudden blurring of vision and pain 2days after injury. A flying 'mengkuang leaf' hand fan thrown by his brother while playing hit his left eye at home. On examination, his left eye visual acuity is hand movement. Reverse relative afferent pupillary defect is negative. The slit lamp examination revealed left eyelid edema,ciliary and conjunctiva congestion. There was straight line full-thickness laceration of cornea adjacent to limbus.There was cataract and rupture anterior lens capsule with embedded FB. Lens particle seen in anterior chamber with level of hypopyon. No fundus view. He underwent emergency left eye primary toilet and suturing of cornea.foreign body removal, pars plana vitrectomy ,with silicone oil injection within 6 hours after admission.The vitreous biopsy taken for culture and intra-vitreal injection antibiotics 2mg in 0.1ml Vancomycin , 2mg in 0.1ml Ceftazidime and antifungal 0.005mg in 0.1ml Amphotericin B was given.The patient was put

on moxifloxacin eye drops 1hourly round the clock. Culture and sensitivity of the tap revealed as Peniccillium spp. as causative agents. At follow up, the patient BCVA was improved to 6/60

Conclusion: The early intervention of pars plana vitrectomy in post- traumatic endopthalmitis with intra-vitreal antibiotic may associated with improve visual outcome.

139. How Effective is Crosslinking for Keratoconus? Review of 60 Cases

Author : Jenny P Deva
Institution : Universiti Tuanku Abdul Rahman (UTAR)

Objective: To review 60 (120 eyes) consecutive Crosslinked(CXL) Keratoconic Cases and assess the Post-CXL effect in Corneal Thickness, Topography and Visual Rehabilitation Outcome, as measures of effectiveness, in treating and stabilising Keraaoconus

Method: 1.The Dresden Protocol for Crosslinking was used.
2.Epi-Off Technique.
3.Isotonic or Hypotonic Riboflavin Dextran solutions were used as required
4.The UV Machines used were: 1. Peschke Prototype
2. Platinum PXL

Result: 1. THE POSTCXL CORNEA intially thins but eventually after 6months or 1 year thickens again.
2.TOPOGRAPHICAL CHANGES include CORNEAL REGULARISATION, APEX OF CONE BECOMING MORE CENTRAL, REDUCTION OF ASTIGMATISM
3. VISUAL RECOVERY AND REHABILITATION
The LogMAR results show that visual acuity improvement was gained in almost all KC patients(95%)
The reduced but irregular corneal astigmatism is minimised or corrected totally by KC Rigid Gas Permeables (RGPs) or semisclerals.
4. VISUAL REHABILTATION included using RGPs, Semisclerals, Intacs Corneal Rings,Phakic IOLs

Conclusion: Crosslinking is highly effective for treating and stabilising Keratoconus

140. Concurrent Orbital Cellulitis with Klebsiella ESBL Panophthalmitis: A Distant Complication of Recurrent Liver Abscess.

Authors : Nur Shahirah Amir Hamzah, Mushawiathi Mustapha,
Prof Mae-Lynn Catherine Bastion
Institution : KUMMC

Objective: To report invasive Klebsiella ESBL leading to eye perforation.

Method: Case report.

Result: An 80 years-old lady with underlying gallbladder carcinoma and recurrent liver abscess admitted for ascending cholangitis. She was treated with IV Metronidazole and Cefobid. She also complained of right eye (RE) floaters, periorbital swelling and vision loss for 1 week. RE vision was NPL with positive reverse RAPD. There was proptosis, complete ptosis with periorbital erythematous and tender, restriction of ocular movements, chemotic injected conjuctiva and hazy cornea. RE IOP was 46. B scan revealed thicken choroid and vitreous opacity. Initial ocular diagnosis was orbital cellulitis. Thus, intravenous antibiotic was continued.

Imaging study revealed RE orbital pseudotumour with mucosal thickening of ethmoid and frontal sinus. Nasal scope by ENT was normal. Hepatobiliary ultrasound showed liver abscess measured 6.0cmx8.0mmx4.0mm.

Systemic infective parameters were raised. Her blood culture grew Klebsiella ESBL. Thus, diagnosis was revised to panophthalmitis. RE vitreous tapping was done with intravitreal vancomycin and ceftazidime given. Vitreous and bile culture positive Klebsiella ESBL. Initial intravenous antibiotic was change to Meropem. Despite on intensive systemic antibiotic, her condition progressed rapidly to total corneal perforation. Thus, evisceration was inevitable. She completed IV Meropenem for 10 days and change to oral Ciprofloxacin for 6 weeks.

Conclusion: Co-exitance orbital cellulitis and panophthalmitis is uncommon and has a very poor prognosis in terms of globe salvage. ESBL Klesiella infection can lead to invasive rapid progression of ocular disease especially in person who had known risk factors for Klebsiella infection.

141. Neuroophthalmology Cases in Klang General Hospital

Authors : Thanam T, Kavitha S, Fazilawati Qamarrudin
Institution : Hospital Tengku Ampuan Rahimah (HTAR), Klang

Objective: Neuroophthalmology Cases in Klang General Hospital

Method: Retrospective case study.

Result: There were a total of 49 cases presented to eye clinic and admitted under ophthalmology between January 2017 until June 2017. CT brain/orbit was done for forty five patients (92%). Three patients were diagnosed with intracranial tumour evidenced by CT brain and referred to Sungai Buloh Hospital for further management. Eight patients were found to have cerebral infarct and the underlying medical conditions were optimized. Four patients had optic neuritis and 2 had demyelinating diseases evidenced by CT brain/orbit. Five cases were associated with traumatic optic neuropathy and twenty three patients had normal CT brain findings.

Twelve optic neuritis and five traumatic optic neuropathy were started on intravenous Methylprednisolone 250 mg QID for three days followed by tapering oral prednisolone dosage. Ten patients (58%) visual acuity improved significantly after the initiation of prednisolone. Seventeen patients were associated with poorly controlled underlying medical condition.

Conclusion: Neuro-ophthalmology is an academically-oriented subspecialty that merges the fields of neurology and ophthalmology, often dealing with complex systemic diseases that

have manifestations in the visual system. Presentation of eye symptoms with the aid of imaging is important in diagnosing ocular pathology and life threatening diseases.

142. Endophthalmitis: A District Hospital's Appraisal

Authors : Radtthiga A/P Chelvaraj MBBS (AIMST), Nur Latifah Bt Mohd Zainudin MD (USJ), Yeap Thye Ghee MS Ophthal (UKM), Rohana Bt Taharin MS Ophthal (Malaya)
Institution : Hospital Bukit Mertajam

Introduction: Endophthalmitis is the inflammation of intraocular fluids (aqueous and vitreous) that can be either infectious or non-infectious.Decreased vision and permanent loss of vision are the detrimental complications of endophthalmitis.Good understanding of the risk factors, aetiology, microbial profiles and antimicrobial choices aid in delivering effective management for our patients.

Method: This is a 5 years retrospective observational study from January 2013 till December 2017. A total of 24 patients (25 eyes) were treated in Hospital Bukit Mertajam, Pulau Pinang. Patients' demographic data, risk factors, aetiology, intravitreal tap culture and sensitivity results and clinical outcome were analysed.

Result: Endophthalmitis was the commonest in the middle aged group between 41-60 years old (41.7%). Endogenous endophthalmitis recorded 54% of total cases.Causes of endogenous endophthalmitis are unknown source(33.3%), indwelling catheters(12.5%) and septicaemia(8%). Exogenous endophthalmitis attributed to 46% of the cases. Among the causes are trauma (29%), corneal ulcer (12.5%) and post operative endophthalmitis(4%). Majority (72%) of the intravitreal cultures yield no growth while among the positive intravitreal cultures, 86% were bacteria. Gram positive cocci were the commonest bacteria isolated (71%).Despite prompt treatment, only 2 patients improved with intravitreal antibiotic injection while 6 had to be referred to Vitreoretinal team. 7 patients defaulted follow up and 4 patients had undergone evisceration due to overwhelming ocular inflammation. A few patients' vision deteriorated (3) and 2 patients deceased.

Conclusion: Our study showed similar culture results as other centres. Although current clinical practice guideline is adhered to delineate appropriate treatment for our patients, long term outcome of the management was difficult to monitor as many defaulted follow up or referred to tertiary centre.

143. Retinoblastoma Presentation in HKL 2017

Authors : Siti Farhah Adilah Binti Basiron, Norhafizah Hamzah, Jamalia Rahmat
Institution : Ophthalmology Department, Hospital Kuala Lumpur

Objective: The purpose of this case study is to report the presenting features and the stages of newly diagnosed retinoblastoma patients at Hospital Kuala Lumpur (HKL) in 2017.

Method: Retrospective case review.
All newly diagnosed retinoblastoma patients who presented at Ophthalmology Clinic of HKL between January to December 2017 were included.
Patients demographic and clinical presentation were documented and analysed.

The tumours were classified according to the International Classification of Retinoblastoma (ICRB).

Result: Twenty children have been diagnosed with retinoblastoma.
There were 12 males and 8 females, with age ranged from 2 months to 9 years (median: 26 months).Twenty-two eyes were involved. Eighteen children had unilateral (90%) and two had bilateral eye involvement (10%).Leucokoria was the most common presenting symptoms (85%). Other presenting symptoms include red eye, squint, pain, decrease vision, and proptosis. All clinical presentation were first noticed by parents, none of them from post-natal screening.

Majority of eyes presented at an advanced stage of tumour. Eleven eyes were diagnosed with group E, 6 eyes with group D, and 3 eyes with group c. Two children had extra-ocular retinoblastoma upon presentation.

Five children underwent primary enucleation and13 received chemotherapy. Two children did not receive complete treatment as they defaulted follow up.

Conclusion: Majority of the children presented with advance stage tumour upon diagnosis. Continued efforts are needed to ensure post-natal eye screening in neonate to identify leucokoria to be executed thoroughly. Public health education should be implemented to increase parents' awareness and have early eye examination if there is high index of suspicion.

144. A Rare Case of Dengue Associated Maculopathy

Authors : Durgavashini A/P Govinda Raju, Gowri Supramaniam
Institution : Hospital Tuanku Ja'afar Seremban

Objective: To report a case of dengue associated maculopathy in a healthy adult.

Method: A Case report.

Result: A 31-year-old lady diagnosed with dengue fever was admitted with a 3-day history of fever, myalgia, arthralgia, vomiting and abdominal pain. There were no bleeding manifestations. The lowest platelet count was 47 脳 109 cells/L, hematocrit was 31.5% with a positive dengue serology. Otherwise, she had no known systemic illness. She presented to us on day 3 of illness, with a sudden, painless blurring of vision in both eyes more over the left eye upon waking up from sleep. She denies any eye redness, pain, discharge, photophobia, ocular or head trauma. On examination, best corrected visual acuity was 6/18 in her right eye and 2/60 in her left eye. There was no RAPD. Anterior segment examination was unremarkable. Fundus examination showed bilateral macula edema with cotton wool spots in both eyes. Optical coherence tomography (OCT) was done and showed bilateral macula edema which was worse in her left eye. She was started on intravenous methylprednisolone 500mg once daily for 3 days. Upon completion of steroid, her right eye visual acuity improved to 6/6 however her left eye vision worsened to CF and then to 3/60 after 6 months. Her OCT 6 months later showed resolved macula edema on both eyes.

Conclusion: Ocular manifestation associated with dengue fever is rare but may result in permanent visual impairment. The use of high-dose steroids helps in improving visual acuity.

145. Complicated Periorbital Cellulitis: Case Report

Authors : Nik Ahmad Syafiq Mat Zaidan, Azida Juana
Institution : Department of Ophthalmology, Faculty of Medicine, University Malaya

Objective: To report a case of peri-orbital cellulitis which complicated with central retina artery occlusion and optic atrophy.

Method: Case report.

Result: We report a case of a periorbital cellulitis secondary to lacrimal sac abscess and complicated with central retina artery occlusion and optic nerve atrophy in a 35-year-old gentleman, who presented with unilateral periorbital swelling and eye redness following a blunt trauma resulting from an alleged fall. Initial examination noted normal visual acuity (6/6), with chemosis and restricted extraocular muscle movement. Imaging showed right eye proptosis, lacrimal sac abscess, with intraorbital extension, and right orbital cellulitis, in which the case was co-managed with the ENT team who went in surgically. However, his vision deteriorated (6/60 ph 6/24) and there was evidence of central retina artery occlusion (CRAO). The periorbital swelling and infection resolved after treatment but the patient never regained his vision which worsened to hand movement (HM).

Conclusion: Orbital cellulitis is a life and sight threatening condition, which needs urgent diagnosis and treatment. The complications of orbital cellulitis are ominous and include optic neuropathy, retinal artery/vein occlusion, severe exposure keratopathy, cavernous sinus thrombosis, meningitis and death. It is important to have a high index of suspicion especially in handling ocular emergency and be able to differentiate between a pre-septal or orbital cellulitis. A multidisciplinary approach and teamwork is very important to ensure that the patient receive appropriate care and management of his illness.

146. Ocular B-Cell Marginal Zone Lymphoma: Case Report

Authors : Nik Ahmad Syafiq Mat Zaidan, Fazliana Ismail, Azida Juana
Institution : Department of Ophthalmology, Faculty of Medicine, University Malaya

Objective: To report a case of marginal B cell lymphoma of the conjunctiva, which showed good progress after chemotherapy and radiotherapy.

Method: Case report.

Result: We report a case of right eye low grade non-Hodgkin's B cell lymphoma in a 57 years old Chinese male, who presented with a gradual, painless lower lid and conjunctiva swelling and redness. Initially treated as peri-orbital cellulitis of the eyelid, the condition did not improve with initial treatment, which later progressed to chemosis. Biopsy was ordered and results showed features of low grade Non-Hodgkin B-cell lymphoma and immunohistochemistry are suggestive of marginal zone lymphoma. Initially chemotherapy did not improve the lesion, hence radiotherapy was initiated. 10 months post completion of radiotherapy, the patient is in remission, the tumor has shrunk and happy with the outcome.

Conclusion: The orbital lymphoma is rare and comprises approximately 10% of all orbital neoplasms. Lymphomas of the ocular adnexa are a heterogeneous group of malignancies, composing approximately 1% to 2% of non-Hodgkin lymphomas (NHLs) and 8% of extranodal

lymphomas. This case emphasizes the importance of high index of suspicion in dealing with symptoms masquerading as infective in nature, and multidisciplinary approach to the management of the patient's condition to ensure a good and favourable outcome

147. An Uncommon Endophthalmitis Following Pars Plane Vitrectomy

Authors : Lee Hong Nien, Angela Loo Voon Pei, Tengku Ain Fathlun Tengku Kamalden
Institution : University Malaya Medical Centre

Objective: To report an uncommon case of endophthalmitis following a pars plana vitrectomy.

Method: Case report.

Result: A 79 year-old chinese woman with no known medical illnesses had an eventful cataract surgery with a piece of retained cortical matter. Thereafter, a pars plana vitrectomy was carried out. Post operatively on the first day, her vision was 6/9, pinhole 6/9. However, at the night after discharged from the hospital, she returned with her vision dropped to perception to light only. She was admitted to the ward and a vitreous tap with intravitreal antibiotics was carried out within an hour. An urgent pars plana vitrectomy with anterior chamber washout was done. The vitreous tap yielded coagulase negative staphylococcus which is methicillin resistant, and sensitive to vancomycin. Throughout the length of her admission, a total of three times of intravitreal antibiotics were given. Upon discharge from the hospital, her vision remained at 3/60, pinhole 4/60.

Conclusion: Endophthalmitis is a severe inflammation of the uveal tissues and the vitreous. The acute postoperative endophthalmitis is often characterised with severe visual loss. The reported incidence of endophthalmitis after pars plana vitrectomy is relatively low, ranging between 0.03% and 0.14%. Throughout the years from 1995 to 2011, coagulase negative staphylococcus is being reported as the predominant organism. Multiple predisposing factors are possible in contributing to the occurrence of endophthalmitis. Early detection and prompt treatment are important. However, sadly, most of the studies showed poor visual outcomes.

148. Bilateral Cryptococcal Choroiditis with Central Serous Retinopathy in Aids

Authors : Lee Hong Nien, Tajunisah Begam Binti Mohamed Iqbal
Institution : University Malaya Medical Centre

Objective: To report an uncommon presentation of central serous retinopathy in bilateral cryptococcal choroiditis in AIDS.

Method: Case report.

Result: A 37 year-old malay man with AIDS was admitted for cryptococcal meningitis. He was referred to us for endophthalmitis surveillance. No visual disturbance was experience. However upon his fundus examination, multifocal creamy yellow choroidal lesion of different sizes distributed diffusely on the posterior pole. On his blood culture and sensitivity, Cryptococcus neoformans was detected. He was then received an intensive phase of treatment with amphotericine B and flucytosince throughout the length of his hospital admission, following with a consolidation phase of his treatment after discharge. His both eyes' vision has been stable at 6/6. Throughout his regular follow up, he developed central

serous retinopathy on his right eye. It was an incidental finding on the spectral domain OCT examination of his macula. It dissolved gradually throughout his follow-ups.

Conclusion: Cryptococcosis is widely distributed globally. It is commonly in people with a defective cell-mediated immunity. The individuals with HIV infection, or those on immunosuppressive drugs are at risk. Immunocompetent hosts are reportedly to be susceptible too. Cryptococcal choroiditis is not uncommonly found in HIV patients with cryptococcal meningitis, and since choroidal lesion maybe the first presentation of disseminated disease, prompt treatment is important.

149. Ocular Meliodosis: A Case Series

Authors : Kumaresan Soundarajan, Hanizasurana Hashim
Institution : Hospital Selayang, University Malaya

Objective: To report a case series on the various manifestations of ocular melioidosis in patients with positive serology of Burkholderia pseudomallei in Hospital Selayang.

Method: Retrospective case series of patients diagnosed with ocular melioidosis in Hospital Selayang.

Result: Three patients, who were immunocompetent with no evidence of systemic infection; presented primarily with the symptoms of eye redness, pain, and blurring of vision. Two of these patients presented with bilateral disease while the remaining patient presented with unilateral disease.

All patients tested positive for Burkholderia pseudomallei serology and were treated with intravenous ceftazidime, and either oral sulfamethoxazole-trimethoprim or oral cefuroxime for a minimum of two months.

Conclusion: Melioidosis is an infectious disease which can present with ocular manifestations affecting both anterior and posterior segments of the eye. Diagnosis of ocular melioidosis is clinical in nature. Early commencement of empirical therapy is imperative in preventing rapid progression of the disease and loss of vision whilst awaiting confirmatory serological results.

150. Primary Conjunctival Tuberculosis: A Case Report

Authors : Kumaresan Soundarajan, Fazliana Ismail, Tajunisah Iqbal, Norlina Ramli
Institution : University Malaya

Objective: To report a case of primary conjunctival tuberculosis.

Method: Case report.

Result: A 23-year-old lady with no known medical conditions; presented with an insidious onset of increasing left eye redness, swelling, and grittiness of two-month history, associated with mild eye discomfort.

Visual acuity was 6/9 for both eyes, with no relative afferent pupillary defect. Anterior segment examination of the left eye revealed a diffusely injected conjunctiva with a nodular

swelling of the inferior bulbar conjunctiva. Fundus and systemic examination were otherwise unremarkable.

Initial treatment with topical antibiotics and steroids were unresponsive and her clinical symptoms worsened. A series of blood investigations were done, including an infective screen for VDRL; but were unremarkable. Chest X-ray was normal and Mantoux test was negative. She underwent an excisional biopsy of the conjunctiva which revealed intraepithelial and stromal neutrophilic infiltration with multiple epithelioid granulomas as well as Langhans-type multinucleated giant cells with areas of caseous necrosis, suggestive of Mycobacterium tuberculosis.

Patient was started on anti-tuberculosis treatment with Akurit-4. Anti-tuberculosis treatment was completed in six months and she showed remarkable clinical improvement after two months of initiation of treatment and had complete resolution of symptoms.

Conclusion: Primary conjunctival tuberculosis is a rare clinical manifestation of tuberculosis and may masquerade as other forms of conjunctivitis. A high degree of clinical suspicion is required especially in cases of unilateral chronic symptoms or non-responsiveness to steroids. A detailed evaluation with conjunctival biopsy will aid in the confirmation of diagnosis and the initiation of appropriate treatment.

151. Glaucoma Associated with Sturge-Weber Syndrome: A Case Report

Authors : Annisa Cita Permadi, Ferdinand Inno Luminta
Institution : RS Sahid Shairman

Objective: To report glaucoma associated with a rare congenital neuro-oculocutaneous syndrome caused by somatic mutation.

Method: A 23-year-old female presented with epileptic seizure was referred to the ophthalmologist after being admitted to the hospital for the first time and was transferred to high care unit (HCU). On the physical findings we found the Port-Wine-Stain (PWS) was distributed along all trigeminal nerve branches on the right side of her face and extended to the counterpart. Eye examinations revealed the intraocular pressure (IOP) by Schiotz was 37mmHg and 28 mmHg on the right eye (RE) and left eye (LE) respectively with no light perception on both eyes. Visual field was difficult to assess because the patient hardly communicated. Both anterior chamber of the eyes were shallow. The cup to disk ratio was 0.8 and 0.6 on the RE and LE respectively with papillary atrophy. CT Scan showed leptomeningeal angioma ipsilateral to the PWS. We treated the glaucoma with timolol and acetazolamide. We diagnosed the patient with SWS based on the presence of three classic triad of leptomeningeal angioma, PWS, and ocular abnormality.

Result: The IOP continued to decline to 20mmHg on the RE and 17mmHg on the LE after being hospitalized for 7 days.

Conclusion: Medical therapy may suffice to control the IOP on glaucoma associated with SWS but visions couldn't be restored in late-detected case. Early recognition of a possible diagnosis of SWS is essential to control the progression of the disease.

152. Tube Versus Trabeculectomy (TVT): Changing Perspective in Treating Glaucoma

Authors : Ferdinand Inno Luminta, Annisa Citra Permadi
Institution : RS Kramat 128

Objective: To determine if tube shunt surgery is superior to trabeculectomy with mitomycin C (MMC) in treating uncontrolled glaucoma patients.

Method: Literature was found using Pubmed and Cochrane. Selection was done by filtering inclusion and exclusion criteria as well as screening through titles and abstracts. One randomised controlled trial was eligible for this evidence-based case report.

Result: Gedde et al. conducted a study in which a total of 212 patients were included, with 107 patients underwent tube shunt (350-mm2 Baerveldt glaucoma implant) surgery and 105 in the trabeculectomy group. It was found that both procedures were associated with controlled Intraocular pressure (IOP). There was no significant difference in the mean number of post-operative medication in treating glaucoma between the two groups (P= .25). However, reoperation occurred more commonly in trabeculectomy group compared to the tube group (29% vs 9%) (P= .025).

Conclusion: Both procedures were found to be effective in lowering IOP, although it was revealed that reoperation rates were higher in the trabeculectomy group. It must be noted that the decision to re-operate is based solely on the surgeon's clinical decision, leading to potential bias due to the fact that the surgeon had prior information on what treatment the patient was assigned to. Further studies needed to be done in Asian population to match the patient in our case.

153. Extended Orbital Exenteration: A Case Series

Authors : Julian Ng Hooi Shan, Ting Xiao Wei, Adlina Binti Abdul Rahim
Institution : Hospital Serdang

Objective: To describe three cases of extended orbital exenteration, indications and surgical outcomes.

Method: Case Series

Result: Of the three patients, there were 2 female and 1 male patients. They were 53,63 and 69 years old. The first patient presented with maggot infestations involving the whole orbit extending to the lateral part of the nose. The second patient presented with recurrence of basal cell carcinoma, with extensive involvement of the lower canaliculi, lacrimal sac and maxillary area. The third patient presented with complete ptosis, and an ulcerative lesion extending to the lateral canthal region. All patients had computed tomography done which showed the extensive lesions, along with maxillary involvement. One patient had lacrimal gland involvement. However, no patients had intracranial extensions. All patients had incisional biopsy done prior to surgery. Two patients had basal cell carcinoma, while one had baso-squamous carcinoma. All patients underwent extended exenteration with the combine effort from the Otorhinolaryngology team. The first patient underwent extended maxillectomy and partial rhinectomy, the second patient had partial maxillectomy and the third patient had modified subtotal maxillectomy. All patients are under regular follow-up

Conclusion: Orbital exenteration can be divided into subtotal, total and extended. Extended exenteration involves removal of the bony orbit, adjacent sinuses and the involved facial bones. It is a disfiguring and radical procedure with a long cosmetic rehabilitation process. Indications normally include potentially fatal malignancies, conditions that are unresponsive to other treatments, and less commonly for palliation in severe deformity. The procedure commonly involves a multidisciplinary effort.

154. Management of Ectopia Lentis in a Pair of Triplets with Marfan Syndrome

Authors : Chua Szu May, Noorlaila Baharuddin, Ng Kang Kok, Nor Fadzillah Abdul Jalil
Institution : Hospital Melaka

Objective: To report on the management of Ectopia Lentis in a pair of triplets with Marfan Syndrome.

Method: Ectopia lentis is the commonest ocular presentation in Marfan Syndrome due to mutation in the gene encoding fibrillin-1. A pair of triplets were diagnosed to have Marfan Syndrome at 2 years old, and subsequently developed bilateral superotemporal subluxation of lens.

Refractive correction with glasses and patching was done at initial presentation. However non-compliance to patching and glasses led to worsening of vision.
Hence surgical method was chosen. Pre-surgical BCVA for the first twin was 6/60 (OD) 6/45 (OS) and for the second twin was 3/60 (OD) 6/30 (OS).

Result: They underwent bilateral lens aspiration, anterior vitrectomy and anterior chamber iris-claw lens implantation. The post operative vision improved to 6/24 for the first triplet and 6/12 for the second triplet in both eyes.

Conclusion: Optical correction with glasses and contact lens serve as temporary measures as the subluxation may progress. Poor vision in childhood may lead to ambloypia and will impact their quality of life. There are several surgical challenges due to weak zonules, elastic capsule and soft lens. Hence the method of surgery and type of intraocular lens choices are crucial.

Surgical option has a better visual outcome and prevent ambloypia in children with Marfan Syndrome.

155. Webino Syndrome - How Important is an Ocular Examination

Authors : Siti Husna Hussein, Rona Asnida Nasaruddin,
Prof Mae-Lynn Catherine Bastion, Wan Haslina Wan Abdul Halim
Institution : Universiti Kebangsaan Malaysia Medical Centre (UKMMC)

Objective: To report a case of wall-eyed bilateral internuclear ophthalmoplegia (WEBINO) syndrome.

Method: Case report.

Result: A 51-year old man, a chronic smoker with underlying hypertension, presented with giddiness, body weakness and dysarthria. He denied any ocular complaints, but noted to have

ophthalmoplegia. Magnetic resonance imaging (MRI) of the brain demonstrated multiple, small hyperintense lesions over the right subcortical region and midbrain. No acute stroke changes or active demyelination plaque was seen. He was treated as Guillain-Barre syndrome (Miller Fisher variant) and intravenous immunoglobulin (IVIg) was commenced by the neurologist.

Clinically, he did not improve after five days of IVIg administration. He was then referred for an eye assessment. Examination revealed a vision of 6/18, pinhole 6/9 bilaterally. No relative afferent pupillary defect was detected. Mild ptosis was present bilaterally. The eyes were divergent on primary gaze. There was adduction deficit bilaterally with nystagmus on abduction bilaterally with no diplopia noted. Convergence was also impaired. Confrontational field testing was normal. Examination of anterior and posterior segments bilaterally was unremarkable. The findings were consistent with WEBINO syndrome. Neurological examination revealed positive cerebellar signs. Repeat MRI revealed recent multifocal infarct involving the right midbrain and right cerebellum. The diagnosis was revised to posterior circulation stroke.

Conclusion: This case illustrates the importance of ocular examination in a neurological case, in reaching the correct diagnosis. This patient had classical features of WEBINO syndrome, despite being asymptomatic. Investigations and treatment should be tailored to the possible underlying causes, hence avoiding diagnosis delay and unnecessary treatment.

156. Acanthamoeba Keratitis: A Diagnosis to Consdier

Authors : Anis Baidura Azal, Assoc Prof Norshamsiah Md Din, Aida Zairani Mohd Zahidin, Wan Haslina Wan Abd Halim
Institution : Pusat Perubatan Universiti Kebangsaan Malaysia

Objective: To call attention to the severity of acanthamoeba keratitis and to emphasize the importance of early treatment.

Method: Case report

Result: A 22 years old lady, with history of extended contact lens use, presented with right eye redness for 1 month duration. It was associated with minimal pain and progressive blurring of vision. Denies history of trauma or swimming. She was treated as conjunctivitis at a local clinic with topical antibiotic and steroid. As the condition worsened, she went to a hospital and was treated as cornea ulcer. She eventually was referred to our center. She admitted of practising poor contact lens hygiene. Ocular examination revealed visual acuity of perception of light. Right diffuse conjunctival injection. There was central stromal infiltrate with perineural infiltrate at 1 o'clock position. There was an epithelial defect at 2 o'clock measuring about 1mmx2mm. She was started on topical chlorhexidine and gentamycin after corneal scrapping was done. One week post treatment, her cornea was clearer, stromal infiltrate was contracting. The vision improve to 1/60.

Conclusion: Acanthamoeba keratitis can be under diagnosed. The clinical presentation can range from the non-specific (corneal epithelial irregularities some pain and irritation), to the classic (radial keratoneuritis and ring infiltrates). Acanthamoeba keratitis must be considered in the differential diagnosis of keratitis in contact lens user. In our case, rapid anti-amoeba treatment led to contraction of the corneal abscesses and improvement of her vision.

157. A Case Series of Recalcitrant Fusarium Keratitis

Authors : Farah Abu Bakar, Oo Kok Tian, Assoc Prof Mohtar Ibrahim, Assoc Prof Adil Hussein
Institution : Universiti Sains Malaysia

Objective: To highlight the challenges of managing recalcitrant fusarium keratitis, its nature of progression and the role of penetrating keratoplasty in its management.

Method: Case Series.

Result: 3 cases were admitted for corneal ulcer over a period of 2 months. With the common history of trauma with vegetative matter, all 3 corneal scrapping confirmed Fusarium infection.
Case 1 is a 70 year old gentleman whose ulcer responded slowly to treatment, with a large endothelial plaque occupying 3/4 of the anterior chamber.He refused therapeutic penetrating keratoplasty and requested AOR discharge after almost 2 months in ward.
Case 2 is a 59 year old gentleman. His ulcer was complicated with stromal melting and micro perforation. After 2 weeks on bandage contact lens, the perforation resolved with formation of corneal scar. He is planned for optical penetrating keratoplasty at a later date.
Case 3 is a 60 year old lady. Her ulcer was complicated with stromal melting and perforation. Emergency tectonic penetrating keratoplasty was performed. The outcome was good with no sign of recurrence.
All 3 cases were treated with systemic antifungals in addition to topical antifungals and repeated intrastromal amphotericin B injections.

Conclusion: Early diagnosis and anti fungal therapy are critical for controlling fungal keratitis. However, management of Fusarium keratitis remains a challenge despite aggressive and appropriate anti fungal treatment with most cases leading to cornea perforation. Penetrating keratoplasty may produce promising outcome in not only eradicating the infection, but also to rehabilitate useful vision if surgery is performed soon enough to preserve the eye.

158. Comparison of glaucoma progression in Primary Open Angle Glaucoma (POAG) and Primary Angle Closure Disease (PACG)

Authors : Nurull Bahya Suliman, Jelinar Mohamed Noor
Institution : Hospital Kuala Lumpur

Objective: In the absence of raised intraocular pressure (IOP) in the treated Primary Open Angle Glaucoma (POAG) and Primary Angle Closure Glaucoma (PACG) there should be no difference at glaucoma progression in these 2 groups. The purpose of this study is to compare glaucoma progression in the treated POAG and PACG patients.

Method: This is a retrospective cohort study involving 48 POAG and 66 PACG medical record's patients. A total of 436 medical records of patients with mild to moderate form of POAG and PACG who attended follow up at Ophthalmology Clinic, Hospital Kuala Lumpur from January 2010 to December 2015 reviewed and only those were eligible were recruited for data analysis, Mean IOP, series of mean deviation (MD) and Pattern Standard Deviation (PSD) were recorded and analyzed.

Result: The presenting IOP in the PACG was significantly higher compared to POAG. However, with adequate topical antiglaucoma medications has showed no significant different in mean

IOP in both PACG and POAG patients at year 1 till year 3 of follow up. Both POAG and PACG showed a trend of worsening of mean deviation (MD) and increasing pattern standard deviation (PSD) over 3 years of follow up. However only PACG group reached statistical significant. Changes of MD was significantly higher and double in the PACG group compared to POAG.

Conclusion: Our findings show that PACG patients progressed faster compared to POAG in reflection from changes of MD per year despite of good IOP with optimum medical treatment.

159. Experience in Intra-Arterial Chemotherapy for Retinoblastoma

Authors : Liu Chee Chung, Adzleen, Norhafizah Hamzah, Poh Khay Wei
Institution : Hospital Kuala Lumpur

Objective: To analyze our experience in Hospital Kuala Lumpur as the national referral center of Malaysia in managing Retinoblastoma (RB), using Intra-Arterial Chemotherapy (IAC).

Method: Single institution, retrospective, case series of 13 patients with RB managed with IAC over a 4-year period. Medical records and Retcam-photographs were reviewed. Primary outcome was tumor treatment response, globe salvage rate, and treatment complications. Demographics were also recorded.

Result: Total of 13 eyes of 13 patients with RB which underwent IAC using Melphalan since 2014 till 2017 were included. Mean age of patient when they received IAC was 26.5 months. 2 eyes were classified as Groud B (15%), 3 Group C (23%), 7 Group D (54%) and 1 as Group E (8%), according to International Classification of Retinoblastoma (ICRB). All 13 eyes were treated as secondary therapy. Treatment response were Complete (4), Partial (2), No response (2) or Progressed (2). Globe salvage was achieved in 5 eyes (38%), while 8 eyes (62%) ultimately enucleated. Adverse effects reported were: lid edema (4), conjunctiva edema (1), retina ischemia (1), optic neuropathy (1), hemodynamic instability intra-procedure (1). No long term systemic adverse effect, metastasis or secondary cancer was recorded.

Conclusion: IAC is a viable alternative for globe salvage in advanced RB. The globe salvage rate in our center was not high due to advanced disease and done mainly as secondary treatment. In the future, we can initiate IAC at an earlier stage or even as primary treatment, in view outcome from other centers seems promising.

160. Therapeutic Potential of Human Umbilical Cord-Derived Mesenchymal Stem Cells Transplantation in Rats with Optic Nerve Injury

Authors : Looi Sok Yee, S.Y. Looi, M.L.C. Bastion, M.H. Hairul Nizam, K.Y. Then, S.N. Leow, Chi D. Luu
Institution : Pusat Perubatan Universiti Kebangsaan Malaysia

Objective: There is no effective treatment for optic nerve transection injury. This study investigated therapeutic potential of human umbilical cord-derived mesenchymal stem cells (hUC-MSCs) transplantation in rats with optic nerve injury.

Method: Baseline (week 0) flash visual evoked potentials (fVEP) were performed in Sprague-Dawley rats (n=18). Treatment assigned after crushing right optic nerve. They were divided in 3 groups. Group A (n=6) received no treatment. Group B (n=6) received right peribulbar balanced salt solution injection. Group C (n=6) received right peribulbar hUC-MSCs transplantation. The fVEPs were repeated at week 3 and week 6. Right eyes were enucleated at week 6 for histology.

Result: The fVEP in group C generally showed shorter latency and higher amplitude at week 3 and week 6, compared with group A and B. There was statistically significant difference in amplitude parameter N2-P1, comparing at week 0 with week 6 in group A ($p=0.009$) and group B ($p=0.004$) with lower amplitude, but not in group C. Comparing between group B and group C at week 6, there was statistically significant difference in latency parameters of P1 ($p=0.035$) and P2 ($p=0.011$), with shorter latency in group C. Histologically, group C showed areas with higher nuclear density and co-localization expression of STEM-121 and anti-S100B antibody immunofluorescence stains.

Conclusion: Peribulbar transplantation of hUC-MSCs showed potential in preserving optic nerve function with statistically significant shorter latency delay in fVEP. Immunohistology proved co-localization of hUC-MSCs and glial cells with mature astrocytes over areas with higher nuclear density areas. Further studies are warranted.