



3rd International Conference on

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Posters

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Papillary venous loop in adolescence: A rare cause of branch retinal vein occlusion**Ming-Shan He and Wei-Shan Tsai**

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This case report aims to report a rare etiology of branch retinal vein occlusion in adolescence. Herein we would like to present a rare case of young patient with BRVO due to papillary venous loop, and summarize the highlight points from review of the literature. To the best of knowledge, our case is the first one that report the papillary venous loop could cause branch retinal vein occlusion. A 22 year-old college boy without systemic diseases presented to our clinic with complaints of seeing light spots over right lower half of the visual field for five days. Ophthalmic examination revealed a flame-shaped hemorrhage over temporal upper retina in the right eye (OD), other ophthalmic examinations were non-remarkable. Vital signs were checked with a stable blood pressure and heart rate within normal limits. Laboratory studies showed a normal range of complete blood count, random-glucose, lipid profiles, coagulation profiles, autoimmune indicators and inflammatory index. The fluorescein angiography revealed a delayed return of temporal upper venous circulation with an underlying ischemic zone at 22 seconds, and a small venous loop was visible and continuously enhanced since 42 seconds OD. A final diagnosis of papillary venous loop results in Branch Retinal Vein Occlusion (BRVO) OD was made. Branch retinal vein occlusion is a rare ophthalmic disease in young patients. In this population, a different differential diagnosis would be listed compared with the elderly. Papillary venous loop is one of the rare causes of branch retinal vein occlusion in youth, which should be bear in mind during clinical approaching.

Biography

Ming-Shan He has his expertise in treatment and passion in improving the retinal and macular disorders. His open and contextual evaluation model based on responsive constructivists creates new pathways for improving healthcare. He has built this model after years of experience in research, evaluation, teaching and administration both in hospital and education institutions.

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Anterior migration of dexamethasone implant in a post phacovitrectomy patient with intact posterior capsule: Case report**Ming-Shan He, Jia-Rong Zhang and Yuan-Chieh Lee**
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Purpose: To describe the clinical course, complications of anterior migration of a dexamethasone intra-vitreous implant (OZURDEX®) and subsequent management strategies.

Methods: To review the medical records of a case with cystoid macular edema after phacovitrectomy received intra-vitreous implantation of OZURDEX® and developed anterior migration the implant with reversible corneal edema without removal of the implant. The best-corrected visual acuity, macular microstructures determined by spectral-domain optical coherence tomography and corneal endothelial cell-density estimated with specular microscope were demonstrated.

Results: A 60 year old male presented to our clinic with cataract, rhegmatogenous retinal detachment, vitreous hemorrhage and epi-retinal membrane of left eye. Although phacovitrectomy, epi-retinal membrane peeling of left eye were performed, recurrent rhegmatogenous retinal detachment was noted on post-operative day 38. Reattached the retina with secondary pars plana vitrectomy was done successfully. Mild cystoid macular edema and intact posterior capsule were noted post-operatively. However, significant cystoid macular edema was noted after secondary IOL implantation into bag, so intra-vitreous implantation of OZURDEX® was performed. One week later, macular edema improved and retina was well attached after mydriatic examination. Nevertheless, acute onset blurred vision of left eye was noted after bowed his head persistently on the next day. Examination revealed corneal edema with OZURDEX embedded at inferior angle of anterior chamber. The implant was repositioned back to vitreous cavity after mydriasis then kept patient with supine position immediately. However, OZURDEX re-migrated to anterior chamber 40 days later and repositioned into vitreous cavity after the same maneuver. After that, pilocarpine was prescribed and migration didn't recur. Although corneal edema resolved, specular microscopy revealed decreased endothelial cell counts one month later after the episode of implant anterior chamber migration.

Conclusion: Even with an uneventful phacoemulsification surgery, it is still possible that the intra-vitreous implant migrates to anterior chamber through weak zonules, especially in vitrectomized eyes. As a result, mydriatic fundus examination should defer or inform the patient not to have bowed his head after pupillary mydriasis. Besides, the migrating implant could be managed with supine position then constrict the pupil with pilocarpine instead of removal of the implant.

Biography

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Accepted Abstracts

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Comparative evaluation of the effect of diabetic retinopathy progression factors on the content of the marker of endothelial damage interleukin-8 in the blood at the metabolic syndromeValeriy Serdiuk¹ and Liudmyla Pylypenko²¹Dnipropetrovsk Regional Clinical Ophthalmology Hospital, Ukraine²Municipal Polyclinic, Ukraine

Background: Clinical studies indicate an increase in the levels of pro-inflammatory cytokines, adhesion molecules in the blood serum, activation of immune cells at diabetes and their correlation with the progression of Diabetic Retinopathy (DRP).

Objective: In patients with Metabolic Syndrome (MS), the concentration of blood circulating interleukin-8 (IL-8) was studied at various stages of DRP and a comparative evaluation of the effect of the factors of the progression of DRP on its content in the blood was performed. Researches were carried out in 64 patients with MS and DRP (men and women, mean age 61.55 ± 2.37 years, average Type-2 Diabetes (T2D) length from registration date 11.23 ± 2.11 years, mean level of glycated hemoglobin (HbA_{1c}) $9.89 \pm 0.78\%$, mean BMI 34.55 ± 3.75 kg/m²), which were divided into 3 groups depending on the stage of the DRP.

Method: The ANOVA and regression analysis were used as statistical analysis.

Result & Conclusion: It has been shown that the factor of age of patients (up to 60 years), the duration of diabetes (more than 10 years), the sub-compensation of carbohydrate metabolism and the peculiarity of hypoglycemic therapy (oral administration) may influence on the level of IL-8 in blood in patients with MS on the proliferative stage of DRP. A statistically significant negative association ($r = -0.29$, $R^2 = 8.6\%$, $p = 0.03$) of the level of IL-8 in the blood and the age of the patients and the trend ($r = -0.25$, $R^2 = 6.3\%$, $p = 0.06$) to the inverse relationship of the duration of T2D and the concentration of IL-8 in the blood of patients with DRP and MS. The conclusion is drawn regarding the association of IL-8 with DRP, especially in patients under 60 years of age.

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The objective refraction with the auto refractometer vs. the subjective refraction with traditional method and phoropter**Ernesto Valdenegro**

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Today the use of the computerized refractometer has become popular in the ophthalmological and optometric consultation, being the most used instrument in the daily clinic, forgetting the importance of the subjective refraction with probines lenses, either of the phoropter or of the lens box, even static and dynamic retinoscopy. This study shows the strengths and weaknesses of automatic objective refractive methods, compared with results obtained by traditional subjective refraction methods. The instrumental hyperopia and the effect of the conoid of Sturm, in the correction of irregular astigmatisms, such as those produced after cataract surgery, or a keratoplasty, even after refractive surgery; they have refractive adjustment values, which are necessary to prescribe to achieve optimal visual acuity. We seek for our patient a visual acuity 20/20 or a visual acuity 20/happy, where the visual comfort is the best with the ideal refraction.

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Incidence of posterior vitreous detachment after femtosecond LASIK compared with microkeratome LASIK**Moataz Hamed Osman**
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This is a prospective, nonrandomized comparative unmasked study. The purpose was to compare the incidence of Posterior Vitreous Detachment (PVD) after femtosecond and microkeratome LASIK. Eligible patients chose between femtosecond and microkeratome LASIK after appropriate counseling. B-scan ultrasonography was performed before surgery by a single operator. Patients with preexisting PVD (partial or complete) were excluded. The axial length was also recorded. All surgery was performed by a single surgeon at Rowad Correction Centre, Cairo, Egypt. During surgery, the suction time was measured. Ultrasonography was repeated one month after surgery by the same operator to detect PVD. The results are 10 patients (20 eyes, group M) underwent LASIK using the Moria M2 microkeratome and 10 patients (20 eyes, group F) underwent femtosecond LASIK with the IntraLase FS-150. In groups M and F, respectively, the proportion of women was 80% and 70% and the mean age was 24.7 ± 4 years and 25.7 ± 3.3 years, the mean axial length was 24.2 ± 1.2 and 23.8 ± 1.2 mm and the mean suction time was 18 ± 2 seconds and 63 ± 4 seconds ($P=0.001$). After surgery, PVD was detected in 4 eyes (20%) in group M and 17 eyes (85%) in group F ($P=0.000044$). It can be concluded that the incidence of PVD one month after femtosecond LASIK was higher than after microkeratome LASIK. This may be due to longer suction time during femtosecond LASIK despite lower suction pressure.

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Corneal endothelium damage after phacoemulsification surgery: A specular microscopy study**Raghda Faisal Abdelfatah Mutwaly**
Al-Neelain University, Sudan**Aim:** The study aimed to evaluate the effect of phacoemulsification surgery on corneal endothelium cells.**Material & Methods:** This prospective cross-sectional study was conducted in Al-Neelain University Eye Hospital at the faculty of optometry and visual sciences in 200 patients from August to October 2016. The study protocol was approved by the ethical committee of the scientific research deanship at Al-Neelain University. All patients had senile cataract and underwent phacoemulsification surgery in one eye; their age was 50 years or more. Patients should have endothelium density more than 1000/mm². Patients with history of systemic disease and ocular trauma should be excluded from the study. A comprehensive clinical examination was performed before cataract surgery and one month after surgery; the examinations were included measurement of visual acuity, outer eye examination and assessment of corneal endothelium cells and central corneal thickness. Then data was analyzed by using statistical package of social sciences (SPSS 20). Descriptive statistics were performed and t-test was used to find correlations between measurements pre and post-surgery.**Results:** The study revealed that endothelium cell density was 2178.1±463.9/mm² before surgery which decreased to 1162.8±519.5/mm² after surgery with significant difference (P=0.000). Cell number also decreased from (53.24±26.11) pre-surgery to (31.21±20.38) post-surgery (P=0.000). However, the variation between cells size pre-surgery (39.45±12.03) and post-surgery (37.83±15.85) had no significant difference (P=0.521). Furthermore, hexagonality was decreased from 38.26±17.28% pre-surgery to 25.74±24.6% post-surgery with a significant differences (P=0.001). Also, the central corneal thickness showed no significant difference pre-surgery (473.4±27.8µm) and post-surgery (478.7±66.16 µm) (P>0.05).**Conclusion:** Phacoemulsification damaged more than half of corneal endothelium cells. It also reduced hexagonality and cell number of endothelium.

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Stage of Hypertensive Retinopathy among Patients who undergone Cataract Surgery in Zamboanga City Medical Center**Jerne Kaz Niels B. Paber**
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Background: Individuals who are not known hypertensive are noted to have blurring of vision as an initial presentation. Preventable co- morbidity such as hypertension is essential in saving sight in patients with cataract.

Objective: To determine the prevalence of hypertension and stage of hypertensive retinopathy among individuals who undergone cataract surgery and to identify the association between the stage of hypertension and the risk factors for hypertension and the stage of hypertensive retinopathy.

Methods: This prospective study included 203 individuals. All of the participants were noted to have mature cataract surgery done and was noted to have followed up at Tzu Chi Eye center from July 1 2017 to March 30, 2018. The nature, significance and procedure of the study were explained to every identified respondent. There was only one ophthalmologist who saw the participants who enrolled in the study. Once they understood the study, a written informed consent was taken. They were asked to answer questions provided by the researcher and their laboratory results were recorded. A follow up after 2 weeks was done in order to determine the stage of retinopathy of the patients. Demographic variables, hypertensive retinopathy, history of hypertension, medication usage, compliance, ECG changes, proteinuria, creatinine, and cardiomegaly on chest x-ray, radiographic identification of Atheromatous aorta and fundoscopic examination were analyzed. The Wong and Mitchell classification and the Keith, Wagner and Barker staging system was used for retinopathy grading.

Results: A total of 203 patients (117 men, 86 women) with mature cataract were enrolled in this study, mean age was 64.33 +/- 9.7 years. Upon inclusion, 92% are noted with hypertension and 7 out of 10 were noted to have severe hypertension. One out of four patients were newly diagnosed with hypertension. Among previous hypertensives, Twenty one percent were not compliant to treatment. The Grade of hypertensive retinopathy correlated with duration of illness but did not with severity of hypertension.

Conclusion: The American Heart Association stage of hypertension and the stage of hypertensive retinopathy by Keith, Wagner and Barker has been shown to be directly associated with each other. The Grade of Hypertensive Retinopathy reflects duration and not the severity of hypertension.

Recommendation: Although cataract operations are low risk, the current practice of referring these patients for medical evaluation prior to surgery is an excellent opportunity to diagnose new hypertensives and identify noncompliant cases.

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Wood penetrating orbital injury**Rini Kusumawardhany**

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Penetrating eye injury was common in children 0-16 years (42.5%) followed by adult ≤ 30 years (41.6%). The commonest cause of penetrating ocular injuries was stick/wood (41.2%). A 55 years old woman had wood penetrating injury on lower eyelid. She fell forward on corn stick, accidentally while farming. Visual acuity was 5/20. Head and orbita CT scan and eye ultrasound was normal. A 3.6 cm wood chip was removed from the wound site, using clamp under retrobulbar anesthesia. After wound debridement, the orbicularis and skin are closed with 6-0 polyglactin suture. Post operation visual acuity was 5/9 and improvement in ocular motility restriction. Penetrating or perforating injuries should be evaluated and treated immediately. Depending on the material causing the injury and location of entry, severe vision loss can occur. Systemic, topical antibiotics and tetanus toxoid injection was given to reduce the incidence of endophthalmitis, orbital cellulitis or panophthalmitis.

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Clinical refraction and the effects of optical filters**Ernesto Valdenegro**

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This subject arises from the research carried out at the University of Uruguay, in the optics and optometry career, on the effect and incidence of optical filters on the final clinical refraction, where the prescription may not correct the refractive errors determined. Analyzing the spectrum of visible light, mainly the wavelengths of its ends, such as red light and blue light, a study is made about how the filters affect these wavelengths, in the refraction that corrects myopia and hyperopia mainly, in addition to the total astigmatism. Corrections for presbyopia, if they use a coloration or an absorption or interference filter, can improve the performance of visual performance and interact in accommodative convergence. The use of technologies, such as cell phones, tablets, computers and any electronic device that emits light at wavelengths close to ultraviolet, such as blue, directly affect not only the prescribed refraction, but also alter the accommodation and the convergence, because these devices are used in near vision. This investigation shows that optical filters are more convenient according to the refractive error to be corrected and the relationship between accommodative convergence and accommodation.

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Retrospective efficacy and safety analysis of Zybev (bio-similar of Bevacizumab) use at tertiary eye care centers in India: Spectra study**Sandesh Warudkar**

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Purpose: The purpose of this study was to evaluate the efficacy and safety profile of intra-vitreous injection of Bevacizumab bio-similar (Zybev) for various retinal neovascular conditions.

Methods: Retrospective analysis was carried out on 108 injections which were administered with intra-vitreous Zybev injection at different tertiary eye care centers in India. The injections were administered for various indications such as wet Age-related Macular Degeneration (AMD), Diabetic Macular Edema (DME) and Retinal Vein Occlusion (RVO).

Results: The mean age of the patients was 62.7±8.40 years. A total of 61.1% injections were administered to men and 39.9% to women. The indications for which the injection was administered were DME (43.6%), wet AMD (28.7 %) and RVO (27.7%). Mean pretreatment BCVA was 0.94±0.29 logMAR with CMT 355.76±54.9 µm and post injection BCVA at day 30 was 0.81±0.26 logMAR with CMT reducing to 292.20±40.81 µm, indicating statistical significance (P=0.001 and P<0.0001, respectively) for all groups. Among the ocular side effects, none of the patients were reported with severe inflammation, endophthalmitis or rise in intraocular pressure (IOP)>21 mm of Hg during follow up period of one month post injection. No systemic adverse events were noted in study population.

Conclusion: This retrospective analysis provides real time evidence regarding the efficacy and safety profile of bio-similar of Bevacizumab, Zybev. However, more long term, prospective safety and efficacy studies are still awaited, this short term retrospective data suggest that Zybev can be effective and safe in the management of ocular conditions including DME, wet AMD and RVO.

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Clinical significance of ocular changes in leukemia**Sagili Chandrasekhara Reddy**

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The ocular involvement in leukemia is due to vascular abnormalities affecting the retina, direct infiltration into various tissues of the eye and neuro-ophthalmic signs. 288 patients of all types of leukemia, aged between 6 weeks and 78 years of both genders, were examined for ocular involvement in the oncology wards, within two days of diagnosis before starting chemotherapy. Ocular lesions were seen in 102 patients (35.4%) retinal vascular changes in 31.6%, infiltration of ocular tissues in 1.7% and neuro-ophthalmic signs in 2.1% cases. Only 10% out of 35% of patients had eye symptoms at the time of ocular examination. In acute leukemia patients, a higher white cell count was significantly associated with occurrence of intra-retinal hemorrhages (IRH) ($p=0.05$) and white centered hemorrhages (WCH) ($p=0.002$), while low platelet count was significantly associated with the presence of intra-retinal hemorrhages only ($p=0.01$). There was no correlation of Cotton Wool Spots (CWS) with any of the hematological parameters. Macular Hemorrhage (MH) was found to be significantly associated with the risk of incident of ICH ($p<0.05$) within the first 30 days after diagnosis. However, no association was found between the incidence of ICH and the presence of IRH, WCH or CWS. There was no association between the presence of any retinal lesions and complete remission induction rate. The median overall survival of those with IRH was significantly lower than those without such lesions ($p=0.002$). No association was found between the presence of any of the retinal lesions and hematological parameters in chronic leukemia patients. High white blood cell count should be considered as important as low platelet count in the pathogenesis of retinal hemorrhages. Patients with MH should be monitored intensively for the development of ICH within first 30 days after diagnosis. Presence of IRH may be considered as an indicator of poor survival prognosis. Therefore, eye examination should be included as a part of the evaluation protocol in leukemia patients, irrespective of presence or absence of eye symptoms.

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Antibiotic prescription for infective conjunctivitis in general practice**Chandni Nigam**

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Infective conjunctivitis is a common self-limiting condition which constitutes around 35% of ocular presentation in general practice. A Cochrane systematic review investigating the effect of antibiotic treatment in the management of bacterial conjunctivitis concluded that the benefits from antibiotic use compared to placebo were marginal. UK National clinical guidelines further state that topical antibiotics should not be prescribed as first line treatment for conjunctivitis. The aim of this audit was to compare the frequency of antibiotic prescription at a busy general practice surgery against the standard set by national guidelines. A retrospective analysis of patients presenting with symptoms and signs of infective conjunctivitis over a period of fifteen months were collated using the SystemOne patient database. 97% of patients included in the study were prescribed topical antibiotics as first line treatment for conjunctivitis. Another 2% of consultations showing evidence of delayed prescribing. Doctor and patient education is important to manage expectations relating to the prescription of antibiotic to reduce unnecessary use. This has implications for reducing antibiotic resistance and improving cost-effectiveness of treatment. Changes implemented at the practice following the audit included updating general practitioners on the latest evidence and national guidelines on infective conjunctivitis management and creating an information leaflet for patients presenting with infective conjunctivitis containing advice on supportive measures to manage their symptoms.

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