

Miscellaneous

PP476

A challenging case of endogenous endophthalmitis

Presenting author: Jay Jun Lee, Ireland

Purpose:

Endogenous fungal endophthalmitis is a rare disease but with increasing prevalence due to rise in use of immunosuppressive therapy, chronic illnesses and intravenous drug use. Timely diagnosis and treatment are important for good prognosis. We described the rare occurrence of endogenous fungal endophthalmitis associated with intravenous drug use (IVDU) and emphasise the importance of multi-disciplinary team management to achieve an excellent outcome in these challenging cases.

Setting:

Cork University Hospital, Ireland

Methods:

We present a case of a 27-year-old lady who presented to the emergency department with 10 day history of blurring of vision and photophobia. Medical history was significant for regular IVDU, but otherwise unremarkable. She was of no fixed abode. On examination, right eye vision was 6/18, lids were oedematous, conjunctiva was injected, 4+cells in the anterior chamber and hypopyon, IOP was 11. Fundal examination showed a focal chorioretinal infiltrate at the macula and multiple “string of pearl”-like vitreous opacities. Examination of the left eye was normal. She appeared systemically well. The clinical appearance was strongly suspicious for candida endophthalmitis.

Results:

The patient was immediately planned for admission for joint management under ophthalmology and infectious disease services for treatment and medical workup. Communication with the general practitioner and homeless service was established from the start. She was treated with intravitreal amphotericin, 6-week course of fluconazole, periocular triamcinolone and topical prednisolone acetate. Vision improved to 6/6 with complete resolution of intraocular inflammation despite multiple absconsion and vision worsened to 2/60, a week after initial presentation.

Conclusions:

IVDU, particularly heroin use, is a known risk factor for endogenous fungal endophthalmitis. Prompt treatment is indicated due to the high ocular morbidity. Additionally treatment is challenging due to non compliance with medication and hospital attendance in active users. In this case, regular communication was established with the general practitioner and homeless shelter from the outset, as well as joint management with the infectious disease services. Despite the challenges an excellent outcome was achieved, and this case illustrates the importance of a multidisciplinary team approach in such cases.

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PP477

The French version of Catquest-9SF validated using an electronic notepad for patients

Presenting author: Mats Lundström, Sweden

Purpose:

1. To validate the French version of Catquest-9SF by Rasch analysis. The traditional way to collect patient-reported outcome measures is to use pencil and paper. In this study we also want
2. to test an electronic notepad for entering questionnaire responses by the patients.

Setting:

Two French clinics: Ophtalmologie Chénieux, Polyclinique de Limoges, Limoges, France and Institut Ophtalmologique Sourdille-Atlantique, Elsan Santé Atlantique, Nantes, France.

Methods:

The Catquest-9SF questionnaire was translated from the English version into French by Mapi Language Services (Lyon, France). The International Society for Pharmacoeconomics and Outcomes Research (ISPOR) principles of good practice for the translation and cultural adaptation process for patient-reported outcomes were adopted. Patients undergoing cataract surgery from February 2018 to August 2019 in two reference centres in France were invited to complete the questionnaire before surgery and within three months following surgery. A digital notepad was constructed with one question displayed per screen and large buttons for responses. The result of the completed Catquest-9SF was visible on the practitioner's dashboard.

Results:

The preoperative questionnaire was completed by 848 patients, median age 72 years, 61% females. The reliability was satisfactory, with a Cronbach alpha coefficient of 0.87. The Rasch analysis showed good precision, with a person separation of 2.32 (should be >2.0) and a person reliability of 0.84. Fit statistics showed that all 9 items contributed to the result with no redundancy or outlier items. Responsiveness was tested with 211 completed pre- and postoperative questionnaires. The effect size was 2.6. After some initial adjustments of the touch screen of the notepad to facilitate clicking the patients coped well with entering their responses.

Conclusions:

The Catquest-9SF was translated from English to French using recommended methodology. The French version was completed by patients by use of a digital notepad. Analyses showed excellent psychometric properties of the questionnaire. Responsiveness was tested by patients completing both a questionnaire both before and after cataract surgery. Analyses showed exceptionally good responsiveness with a large effect size. Collecting patient-reported data through a digital notepad will increase safety and reduce errors compared to the traditional pencil and paper method.

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PP478

Management of serious complications after cosmetic iris implants

Presenting author: Francesco D'Oria, Italy

Purpose:

There is an increasing number of people asking for the elective change of eye color. Although the use of cosmetic iris implants is strongly discouraged, this surgical practice is still used in many countries. We review the medical records of patients referred to our clinic for the management of complications after NewColorIris or BrightOcular implant.

Setting:

Vissum Miranza, Alicante, Spain

Methods:

Retrospective series of cases of patients that were referred to our clinic for the management of complications arising after cosmetic iris implant. Medical records including clinical measures of best-corrected distance visual acuity, uncorrected distance visual acuity, tonometry, endothelial cell density and subsequent surgeries were analyzed where applicable.

Results:

10 eyes of 5 patients referred for the management of complications derived from cosmetic iris implants (2 NewColorIris, 8 BrightOcular). All the eyes had been explanted between 1 to 60 months after implantation. ECD was 848 ± 227.5 and 30% of eyes required a corneal transplant: 2 eyes had DMEK and 1 eye had PKP, while 3 patients have been advised of the necessity to perform a corneal transplant surgery. 90% of the eyes had ocular hypertension and filtering surgery was needed in 2 cases (20%). 40% of our patients required cataract surgery: mean age was 36 years.

Conclusions:

Despite both implants are not CE marked or FDA approved, the growing malpractice leads to continuous implantation of such device, and it is common to deal with patients reporting such complications. Patients with cosmetic iris implants carries a high risk of definitive loss of vision as well as other fearsome complications that should be emphasized to patients.

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PP479

Evaluation of Ocular Surface Disease Symptoms and Patient Satisfaction in Dry Eye Disease after 84 Days of Treatment with Preservative-free Eye Drops Containing Sodium Hyaluronate and Trehalose: Interim Study Results

Presenting author: Antonio J. Mateo Orobia, Spain

Purpose:

Dry eye disease (DED) is characterized by ocular discomfort and visual disturbance. It has a multifactorial etiology, including insufficient tear production and/or excessive tear evaporation linked to multiple conditions. A preservative-free eye drop formulation containing sodium hyaluronate and trehalose (SH-THL, Thealoz[®] Duo, Laboratoires Théa, France) capitalizes on the bioprotectant properties of trehalose. This study evaluated, after 21 and 84 days of daily use, the improvement of ocular surface disease (OSD), dry eye signs and symptoms, treatment satisfaction in patients with DED receiving SH-THL.

Setting:

This survey was conducted in 20 ophthalmological practices in Spain and 10 optometrist centres in the United Kingdom.

Methods:

Multi-center, international, non-interventional prospective survey lasting 84 days with up to 2 post-baseline visits in up to 310 adult subjects with clinically confirmed DED requiring artificial tears. Clinical signs with Schirmer Test, tBUT, hyperemia, dry eye symptoms with OSDI[®] scale and the DEQ-5 questionnaire as well as patient satisfaction were assessed at baseline, visit 1 (28 days) and 2 (84 days). SH-THL was to be instilled when needed. The number of eye drops instilled per day was determined using the Kali Care Drop Meter (n=42).

Results:

Data from 238 patients were analyzed. 83.2% were women, the mean age was 57.9±15.1 years. At baseline, the overall OSDI was 42.2±19.9 and 61.3% of patients had severe OSDI. The DEQ-5 score was 12.4±4.1 and the patient treatment satisfaction score was 6.4±2.1. The OSDI significantly improved ($p<0.001$) after 84 days. The DEQ-5 score significantly improved at visit 1, persisting until visit 2 (both $p<0.001$) with a statistically significant ($p=0.002$) difference between visit 1 and 2. Patient satisfaction with treatment significantly improved ($p<0.001$) at visit 1 and 2 compared to baseline. All clinical signs significantly improved after 84 days of SH-THL.

Conclusions:

Results confirm that continued use of eye drops containing SH-THL reduced DED signs and symptoms, OSDI scores, and result in a very high patient satisfaction.

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PP480

In Vitro evaluation of Hypobromous Acid hygiene stabilized solution in reduction of bacterial load associated to blepharitis conditions.

Presenting author: Andrea Bedei, Italy

Purpose:

To evaluate the in-vitro bactericidal activity of a stabilized active bromine solution at neutral Ph, MDI-102, for the potential use in the treatment and prevention of blepharitis.

Setting:

The study was conducted in the Department of Research & Development of Albano Laziale, Rome, Italy

Methods:

The solution is named MDI-102 and it consists in active free bromine solution (Br₂, HBrO/BrO⁻) The tested microorganisms were: Pseudomonas aeruginosa, Enterococcus hirae, Serratia marcescens, Staphylococcus aureus, Pseudomonas aeruginosa, Escherichia coli, Staphylococcus epidermidis. MDI-102 bactericidal activity has been tested at 500 and 80 ppm (active bromine concentration). Microbial concentration has been monitored at different times: 0.5, 1, 2, 5, 20, 30 minutes after the addition of the bactericidal solution. Kinetic tests were carried out in “clean conditions” and in “dirty condition” with a protein disruptor. The dermatological tolerability has been assessed on 20 volunteers by Patch testing.

Results:

Kinetic test shows MDI-102 (500 ppm) can effectively remove the inoculated microbial concentration after only 30 seconds of contact (100% of removal) between the microorganisms and the bactericidal solution. Indeed, after 30 seconds, 0 FCU are determined in the Petri dish. The same results are shown with the tests with MDI-102 80 ppm. Dirty condition tests confirm the results shown without disruptor. Based on the obtained data MDI-102 is considered non irritating and dermatologically tested, that means it can be effectively used to clean the periocular area and for the blepharitis syndrome.

Conclusions:

Based on the obtained data MDI-102 is considered non irritating and dermatologically tested, it can be effectively used to clean the periocular area and for the blepharitis syndrome. MDI10280ppm can be considered as an alternative to reduce the use and the abuse of topical antibiotics in the daily practice which may contribute to the increase of resistance to the antibiotics in the clinical setting. MDI10280ppm can be considered as an alternative to reduce the use and the abuse of topical antibiotics in the daily practice which may contribute to the increase of resistance to the antibiotics in the clinical setting.

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PP481

Long-Term Evaluation of Thermal Pulsation System (Lipiflow®) Treatment for Ocular Surface Disease Due to Meibomian Gland Dysfunction Under Two Different Controlled Environments

Presenting author: Andrea NOVO-DIEZ, Spain

Purpose:

To prospectively evaluate the efficacy of a single thermal pulsation system (Lipiflow®) treatment in the symptoms and signs of ocular surface disease (OSD) due to meibomian gland (MG) dysfunction (MGD) after 3, 6, and 12 months under two different indoor controlled environments.

Setting:

Controlled Environment Laboratory (CELab), Vision R&D and IOBA (Institute of Applied Ophthalmobiology), University of Valladolid, Valladolid, Spain.

Methods:

Symptomatic MGD patients with no other OSD and under stable therapies were included. At baseline visit, patients were exposed to a normal controlled environment ([NCE], 23°C, 50% relative humidity) for 1 hour. Symptoms (ocular surface disease index [OSDI]), tear film parameters, bulbar hyperemia, lid margin score, ocular surface staining and meibography were evaluated. Right after, patients were exposed to an adverse controlled environment ([ACE], 23°C, 10% relative humidity) for 2 hours and similarly re-evaluated right after. Two weeks later, LipiFlow® treatment was applied. Same evaluation tests under same NCE and ACE were performed at 3, 6, and 12 months.

Results:

Twenty-one patients (mean age, 59.6±9.4 years) were recruited. Symptoms (OSDI) significantly ($p=0.0036$) decreased at 12 months (28.9±22.2; baseline=43.0±23.9). MG secretion score improved at 3 (11.6±1.3, $p=0.0081$), 6 (12.5±2.4, $p=0.0001$) and 12 (12.2±2.2, $p=0.0005$) months. Lid margin score improved significantly at 6 ($p=0.0117$) and 12-months ($p=0.0007$). The risk, in terms of odds, of decreasing lid margin inflammation and ocular surface staining was higher at 6 and 12 months ($p\leq 0.01$). Lipid layer thickness significantly ($p<0.0001$) constantly decreased under ACE. Non-invasive break-up time decreased significantly ($p\leq 0.001$) at 3 months under ACE and NCE (12.1±9.7). No differences were found in the remaining parameters evaluated.

Conclusions:

A long-term (12-month) beneficial effect was observed in MGD patients after a single treatment with LipiFlow®, not only in MG-related parameters but also, and more relevant to the patient, in symptomatology. ACE did not enhance the known general worsening despite the expected decrease in lipid layer thickness.

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PP482

Choroidal thickness measurement in keratoconus patients with EDI-OCT.

Presenting author: Andrés López-Jiménez, Spain

Purpose:

To determine the choroidal thickness (CT) in Keratoconus patients using the Enhanced Depth Imaging (EDI) or EDI-OCT.

Setting:

Individuals were recruited among healthy and keratoconus patients of our center (Hospital General Universitario Reina Sofía de Murcia).

Methods:

A comparative cross-sectional study has been carried out including 26 patients with KC and 26 healthy controls assessed with Pentacam and EDI-OCT. CT was measured manually with the Caliper function and with the 1: 1 μm ratio. The main variable surveyed was the choroidal thickness at thirteen locations (one subfoveal and six nasal and temporal measurements at 500 μm regular intervals).

Results:

No significant differences were found in age and gender distribution. CT was higher in the subfoveal zone in both groups, and decreased progressively in the periphery. All the 13 CT measurements were higher in the control group, reaching a mean subfoveal CT of $365.35 \pm 114.6 \mu\text{m}$ and $351.48 \pm 106.3 \mu\text{m}$ in KC patients ($p=0.66$). There were no significant differences comparing the mean CT of eccentric points (N1-N6; T1-T5) except from T6 ($p<0,041$). No correlation was observed between anterior segment parameters obtained with Pentacam and mean subfoveal CT (M) in the KC group.

Conclusions:

No significant difference of CT values was found. These results disagree with previous studies in which KC showed thicker choroids. No association between the refractive and keratometric indexes obtained by corneal topography and subfoveal CT was found. No possible correlation between KC and CT was established. Further studies, with larger samples and comparable parameters, are therefore necessary to shed more light on this corneal ectasia. New generation non-invasive diagnostic methods of the retina and the choroid (such as SS-OCT and EDI-OCT) offer new pathways of research study the possible relationship between the structure of the choroid and corneal diseases.

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PP483

Paulus Aegineta, a physician of 7th century A.D. and his contribution to ophthalmology

Presenting author: Dr GEORGIOS BALANIKAS MD, PhD, Greece

Purpose:

Our aim of this presentation is to exhibit the work of the byzantine physician Paulus Aeginetus and especially his contribution to the treatment of ophthalmic diseases as cataract, glaucoma, trauma, and other conditions. It is believed that he was born on the Greek island of Aegina c. 625 A.D.

Setting:

The facts of Paulus Aegineta took place in Byzantium during the seventh century AD and this work was completed in the A' Ophthalmologic Clinic of Aristotle University of Thessaloniki, AHEPA Hospital, Greece.

Methods:

There is a classic medical text of the middle Byzantine period which was a great source for medieval medical knowledge, but very little was known about its author. The work is 'The Seven Books of Paulus Aegineta' or 'Epitome Medicae' This work is a compendium of ancient and byzantine medical knowledge and it was the basis for the development of the knowledge of late Arabic medicine. This presentation was based mainly on the 6th book of this 3-volume compendium of English Edition in 1834, published by Francis Adams which includes the Ophthalmologic issues.

Results:

'Ἐπιτομαὶ ἰατρικαί' is the original title of Paulus Aegineta's work. At least three manuscripts from Paulus's work are kept in the library of Megisti Lavra monastery of Mount Athos. This library was established around 963 A.D. by St. Athanasius, founder of the conventus life of Mt. Athos. Fragments of Paulus's work are also in the monastery of Iviron, also in Mt. Athos. Paulus Aeginetus was the only physician of the ancients who described the cataract operation with details. He also described burns of the eyelids by medicines and the subsequent creation of a symblepharon (Συμβλέφαρον).

Conclusions:

Even if Paulus Aegineta's life is completely unknown, his monumental work gives us a rich encounter of the Medicine not only during the 7th century AD but also before and after him and was one of the main sources of medical knowledge for the upcoming generations of the physicians. The sixth book of this work includes several ophthalmological conditions such as eyelid disorders, chalazion, pterygium, trichiasis, cataract, glaucoma, and the diagnosis, medications, and treatment for them. Paulus Aeginetus (625-690 A.D.) considered as one of the great compilers and epitomizers of Medical Knowledge.

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PP484

A comparison of the cost-effectiveness of SMILE, Femtosecond-assisted LASIK and PRK for myopia in a private eye center in Spain.

Presenting author: Marie Joan Therese Balgos, Spain

Purpose:

This study aimed to compare the cost effectiveness of small incision lenticule extraction (SMILE), femtosecond-assisted laser in situ keratomileusis (FS-LASIK) and photorefractive keratectomy (PRK) for treating myopia and myopic astigmatism in a private eye center.

Setting:

A private eye center in Alicante, Spain

Methods:

This analysis used the payer and the health system's perspective. For the payer's perspective, a decision tree model was made, with a time horizon of 30 years. The average weighted utility values and quality adjusted life years (QALY) were computed for each procedure. The average weighted costs were derived and divided by the (QALY) to obtain the incremental cost effectiveness ratios (ICER). These were also computed at different time horizons per procedure. For the healthcare sector's perspective, direct and indirect costs of acquiring and maintaining the facilities were obtained to compute for the minimum number of patients treated per year.

Results:

The weighted utility values were 0.8 for SMILE and PRK and 0.77 FS-LASIK. The weighted QALYs were 24 for SMILE and PRK, 23.1 for FS-LASIK. Average weighted costs were 415.88€, 447€, and 639.49€ respectively. The ICER's were 17.33€/QALY for SMILE, 18.62€/QALY for PRK, and 27.68€/QALY for FS-LASIK. The ICER for SMILE over time ranged from 14.59 to 411.58€/QALY. For FS-LASIK and PRK these were 26.27-454.78€/QALY and 22.31-565.7€/QALY. There was a negative correlation between the ICER and the time after surgery. To gain profit, the minimum number of patients treated is 136 for SMILE, 136 for PRK, and 155 for FS-LASIK.

Conclusions:

Laser corneal refractive surgery is cost-effective for a person desirous of refractive correction for myopia. SMILE is the most cost-effective followed by PRK and FS-LASIK. The cost of investing in laser refractive surgery facilities is outweighed by the potential income in high-volume eye centers.

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PP485

Development of a point-of-care tear diagnostic kit: applications for pre-surgical screening and dry eye disease

Presenting author: Pooja Khamar, India

Purpose:

Higher levels of inflammatory factors (IL-6, IL-8, MMP-9), result in dry eye disease (DED) and may have implications for recovery of patients undergoing refractive surgery. We therefore, tested the efficiency of simple, rapid multi-analyte tear based system for measuring multiple inflammatory factors for clinical applications.

Setting:

Narayana Nethralaya, India

Methods:

Tear samples were collected from 50 controls, 50 patients with ocular surface conditions and 10 patients with intra-ocular conditions. Using a variant of the multiplex ELISA assay system, we IL-6, IL-8 and MMP-9 measurement in a single test. The Schirmer's strips were collected in 1.5ml tubes containing 300µl extraction buffer followed by agitation for 15-30 min. 50µl of the resulting extract was added to each sample well of the cartridge. 1 ml of the specific wash buffer was added to the designated buffer well. The cartridge was loaded into the analyser instrument to deliver the measured values for each analyte.

Results:

IL-6, IL-8 and MMP-9 were significantly ($P < 0.05$) higher in ocular surface conditions. The instrument generated RFU (relative fluorescence units) values from each sample were normalised to the wetting length. IL6 and MMP9 were log-fold higher in dry eye disease (DED) and Steven-Johnson syndrome (SJS) samples ($P < 0.05$) while ocular surface chemical injury samples only had high levels of IL8 ($P < 0.05$). IL8 levels were slightly elevated in case of the non-ocular surface conditions glaucoma and diabetic retinopathy, which has several fold lesser than DED and SJS.

Conclusions:

The data demonstrates that IL6, MMP9 and IL8 levels were detectable across the entire set of patient samples and show clear disease based separation of values. The efficiency and short test duration can significantly assist screening protocols in dry eye and refractive surgery to enable better patient stratification.

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PP486

The Clinical Characteristics of Patients with Ocular Cicatricial Pemphigoid in a Tertiary Eye Hospital in Riyadh, Saudi Arabia

Presenting author: Albanderi Alhamzah, Saudi Arabia

Purpose:

To determine the clinical characteristics of patients diagnosed with ocular cicatricial pemphigoid (OCP).

Setting:

A retrospective study conducted at a tertiary eye hospital in Riyadh, Saudi Arabia.

Methods:

A database search of medical charts from 2014 to 2020 with a referral request or diagnosis of true OCP was conducted. All patients with a diagnosis of OCP with a regular follow-up were included. The following patient characteristics were reviewed and recorded: patient demographics, methods of diagnosis, visual acuity VA, ocular features, disease stage utilizing Foster's staging system, presence of systemic involvement, and type of immunosuppressive treatment.

Results:

Of 67 patients (134 eyes) had OCP with a mean age of 72.7 years. M The diagnosis was based on clinical features. Conjunctival biopsy for direct immunofluorescence was performed in 71.2% of cases and among these, results were positive in 43.2% cases. At presentation, 53.7% of patients had systemic manifestations involving skin, mouth, or genital however only two patients had dermatology consultation. 11.9% of patients do not indicate immunosuppression, but was started in 10.4% of patients, with the rest on treatment from before referral. At the last follow-up, 68.6% were in stage, and the mean VA was hand movement.

Conclusions:

Over a 6-year period, 67 patients were referred to a tertiary eye center in Riyadh, indicating the rarity and diagnostic complexity of the disease.

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PP487

Granulomatous uveitis with iris vascular lesion guided to diagnose Rosai-Dorfman disease (Class IIb Non-Langerhans cell histiocytosis).

Presenting author: Mr Emad Mahmoud, Ireland

Purpose:

Herein, we report the unique case of Rosai-Dorfman disease (extra-nodal type) initially presented with granulomatous Uveitis with minimal Hyphema and upper eyelid well-circumscribed cutaneous vascular lesion.

Setting:

Cork University hospital, Cork, Ireland.

Methods:

A case report of very rare disorder with ocular involvement -retrospective study.

Results:

25-years-old male from Philippines presented at Cork University hospital, Ireland complaining of right painful red eye with a severe reduction of his vision. Also, he has left cervical lymphadenopathy and upper eyelid well circumscribed vascular mass .He has been diagnosed as right granulomatous uveitis associated with Iris vascular lesion inferiorly with minimal Hyphema. Uveitis full workup was carried and reveals high Erythrocyte sedimentation rate (85 mm/hr.), Leucocytosis and Hyperglobulinemia. Upper eyelid lesion was completely surgically excised under local anaesthesia and it led to diagnose Rosai-Dorfman disease (Class IIb Non-Langerhans cell histiocytosis). Also, an MRI brain was performed and shows intracranial multi-focal lesions.

Conclusions:

Ocular features such as Uveitis with Rosai-Dorfman disease is very rare. However, eye Involvement can herald the development of extra-nodal type of RRD and can aid to diagnose of this systemic condition.

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PP488

Unusual presentation of Ocular Rosacea : Palpebral Conjunctiva Pyogenic Granuloma

Presenting author: Yassine Malek, Morocco

Purpose:

The purpose of this case report is to describe a novel association between pyogenic granuloma and ocular rosacea.

Setting:

Ophthalmology Department, Mohammed V Military Training Hospital, Rabat, Morocco.

Methods:

We report a case of a 28-year old man, who presented to the ophthalmology emergencies for a fast growing mass of his right free lid margin over 1 week, associated with chronic tearing and photophobia. The patient had no history of ocular trauma nor ocular surgery, however he complained of a chronic facial flush secondary to sunlight exposure.

Results:

Examination revealed a BCVA of 20/20 ODS. Slit lamp biomicroscopy revealed a pedunculated lobular proliferation of the inferior free lid margin conjunctiva, with abnormally dilated capillaries, consistent with the diagnosis of pyogenic granuloma. Other findings suggestive of ocular rosacea were : Telangiectasis of the lid margin, Meibomian gland dysfunction, inferior micropunctate corneal fluorescein staining pattern. General examination showed cutaneous papular lesions, with nasal telangiectasis in favor of cutaneous rosacea. Medical treatment consisted of local dexamethasone Q.I.D for 7days, tapered on 4 weeks, 100mg Doxycycline B.I.D for 3 months and lubricant eye drops. The mass disappeared after 10 days without surgery.

Conclusions:

Pyogenic Granuloma is a misnomer, and is also called lobular capillary hemangioma and represents in fact, a capillary proliferation in the conjunctival stroma. It is most often associated with ocular surface surgery or trauma, and has rarely been linked to ocular rosacea. Its physiopathology is based on excessive inflammatory response to local surgery or trauma. We can conjunct that the inflammatory microenvironment due to ocular rosacea, and secondary to excessive metalloproteinase expression has favored Pyogenic granuloma growth. We conclude that this novel case pictures wonderfully the large spectrum of ocular rosacea manifestations .

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PP489

Orbital tuberculosis (A case report)

Presenting author: KAMELIA RIFAI, Morocco

Purpose:

The purpose of this study is to describe the clinical polymorphism of the orbital tuberculosis.

Setting:

Orbital tuberculosis is a rare, necrotizing disease caused by mycobacterium tuberculosis. It can affect the orbit structures by the hematogenous pathway or by contiguity. The positive diagnosis is based on a series of clinical arguments but mostly the search

Methods:

We report the case of a 36-year-old young patient, complaining for swelling of the entire upper part of the face. He was already treated for pulmonary tuberculosis at the age of 20 with no complications. The patient reported 4 months before admission periorbital heaviness and pain, then the appearance of swelling in the glabellar region, the eyelids and the cheeks, then the appearance of multiple fistulas in the inner canthus of the eyelids, leaving a slightly clumpy liquid. The ophthalmologic examination noted a preserved visual acuity, strictly normal anterior and posterior segment. A general medical and laboratory workup, orbital CT scan and skin biopsy of the glabellar region were performed.

Results:

The orbital CT scan revealed a process occupying the frontal and maxillary sinuses pushing the eyeballs out. For skin biopsy of the glabellar region, histological examination showed a dense inflammatory infiltrate comprising epithelioid-gigantocellular granulomas with caseous necrosis. The IDR is positive. The diagnosis of osteosinus tuberculosis was made due to the history of pulmonary tuberculosis, the presence of fistulas, the result of the histological study, and the strongly positive IDR. The patient was put on anti-tuberculosis therapy for twelve months. The evolution was spectacular with almost-complete healing clinically and radiologically, but with persistence of hypertrophy of the sinus mucosa, as well as scar-like tissue in the glabellar region.

Conclusions:

The diagnosis of tuberculosis is microbiological and is based on the identification of Koch's bacillus. There is a large clinical polymorphism for which tuberculosis should be considered in front of unexplained inflammation of the orbit. Treatment is based on anti-tuberculosis chemotherapy which allows rapid and complete recovery.

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PP490

Posterior microphthalmia and strong hyperopia: about 4 cases

Presenting author: mrini basma, Morocco

Purpose:

Posterior microphthalmia is a rare congenital anomaly that is most often isolated. It is defined by a normal anterior segment and a short posterior segment.

Setting:

We report the study of four cases followed in our strabology consultation.

Methods:

The parameters collected were: sex; initial consultation age; personal and family history; automatic refraction under cycloplegia; initial and final visual acuity after treatment for amblyopia; the presence of an oculomotor disorder; the aspect of the segment anterior and posterior. The examination was supplemented by a B-mode ocular ultrasound as well as a macular OCT. The sex ratio is 1/3. The starting age for consultation is 2 years. The automatic refraction under cycloplegia is on average +15 D.

Results:

In 75% of cases we find a partially accommodating alternating esotropia and in 25% of cases a nystagmus. The initial visual acuity is 2/10 on average. We find amblyopia in all of our patients. Visual acuity after treatment is good in 50% of cases (8/10). The retinal correspondence is abnormal in 75% of cases. 3 out of 4 patients have papillo-macular folds at the fundus. Macular OCT shows a raised and thick macular fold. On B-mode ocular ultrasound, microphthalmia with scleral thickening is found in all patients with an average of 15mm.

Conclusions:

Posterior microphthalmia associated with a papillo macular fold and severe hyperopia is a rare abnormality. Which can manifest as strabismus as well as amblyopia. Amblyopia can be treated successfully despite the papillo-macular fold. The diagnosis of this pathology is both clinical (fundus) and radiological (ultrasound in B mode)

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PP491

Immunological thrombocytopenic purpura revealed by spontaneous unilateral retro-hyaloid haemorrhage (about one case)

Presenting author: Hamidi basma, Morocco

Purpose:

Non-traumatic intra-vitreous haemorrhages are a serious eye conditions that are potentially blinding, and are defined by the presence of blood in the vitreous cavity, the clinical symptoms of which depend above all on the intensity of the hemorrhage, which can range from simple blurred vision to complete obscurism of vision. The retro hyaloid space is one of the most frequently encountered variants outside of diffuse HIV.

Setting:

The aim of our observation is to report the case of a young patient presenting a unilateral loss of visual acuity (AVB) in the context of a thrombocytopenia revealed by a unilateral spontaneous retrohyaloid hemorrhage.

Methods:

36-year-old patient consulting for a non-painful decreased visual acuity of the right eye in whom the examination shows a retro-hyaloid hemorrhage as well as a generalized anemic syndrome. The patient presenting to the emergency room for a non-painful decreased visual acuity of the right eye with an amputation of the temporal visual field

Results:

The visual acuity: found finger counting at 1 feet, the anterior segment without particularity and at the fundus presence of a retro hyaloid hemorrhage in intermaculopapillary area . The general exam revealed a clinical anemic syndrome. An assessment was carried out revealing severe microcytic hypochromic anemia with a hemoglobin at 7g/dl, thrombocytopenia 11,700. She was referred to internal medicine where diagnosis of immunological thrombocytopenic purpura, she received a blood transfusion and systemic corticosteroid. The evolution was marked by an increase in the platelet, improvement in the visual acuity of the right eye of 2 lines after 1 month of treatment.

Conclusions:

The presence of a sudden spontaneous unilateral decreased visual acuity without pain revealing an HIV should raise suspicion of a hemorrhagic syndrome integrated in the context of an ITP which should lead to an emergency etiological assessment.



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Research Help-Seeking in Residents of Ophthalmology in Mashhad University of Medical Sciences: A Cross Sectional Study

Presenting author: Mojtaba Abrishami, Iran, Islamic Republic of

Purpose:

Considering the undeniable role of the help-seeking strategy in learning research skills, the purpose of this study was to examine the situation of research help-seeking among ophthalmology residents of Mashhad University of Medical Sciences (MUMS).

Setting:

Eye Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

Methods:

In a descriptive cross sectional study, all ophthalmology residents of MUMS (n=46) were included. A validated research help-seeking scale was used to collect data. The scale consisted of 29 items and assessed the three dimensions of the avoidance of help-seeking, adaptive help-seeking, and perceived benefit of help seeking of help-seeking. The answers were scored based on the six-point Likert scale

Results:

Forty-one residents responded to the electronic version of the research help-seeking scale were selected through convenience sampling. In the avoidance of help-seeking axis and perceived benefit of help seeking axis, indexes were in the upper-middle level and in adaptive help-seeking axis was in the lower-middle level. Comparison of each component of research help-seeking in male and female residents and grade of residency (different academic years), showed that there was no significant difference between the two groups in terms of research help-seeking dimensions. Age and components of research help-seeking showed a positive and significant correlation with perceived benefit of help seeking.

Conclusions:

Research help seeking in residents of ophthalmology of MUMS in all three axes were around the middle level and it is recommended to university officials and teachers encourage residents to use adaptive help-seeking during the residency to improve research skill.

Miscellaneous

PP493

Experience of the first Scottish Trainee Selected Component (TSC) in high volume cataract surgery

Presenting author: Magdalena Edington, United Kingdom

Purpose:

COVID-19 has significantly affected training, and in particular surgical opportunities. In the midst of this disruption, the Royal College of Ophthalmologists approved a new TSC in high volume cataract surgery at the Golden Jubilee National Hospital. This was aimed at a senior trainee, ST6 and above, who had achieved the FRCOphth qualification, and was operating independently with at least 300 cases of experience. I had the opportunity to be the first trainee to undertake the TSC between August 2020 and February 2021, and wish to present my experience and results.

Setting:

Golden Jubilee National Hospital, Glasgow, Scotland.

Methods:

I undertook a continuous personal audit of visual and refractive outcomes. Data collected prospectively included patient demographics, co-morbidities, surgical adjuncts used, pre-operative vision and refraction, and complications. Patients then attended their own optometrist in the community 4 weeks post operatively with an audit form, and their refractive and visual outcomes were posted back to the unit.

Results:

I performed 609 phacoemulsifications of varying complexity from the pooled list, including short and long axial length, shallow anterior chamber, poor dilation, Fuch's endothelial dystrophy, vitrectomised eyes, pseudoexfoliation, post trauma eyes, and toric lenses. 298 patients (48.9%) had co-morbidities, some multiple, and 324 patients (53.2%) required surgical adjuncts. Mean age was 73 years (range 36 to 94). Based on a snapshot of 95 cases, my visual and refractive outcomes are within national standards. I had 11 complications in total (4 PCR, 5 zonule dehiscences, 1 endothelial stripping, 1 retained nuclear fragment), and where appropriate I managed these myself.

Conclusions:

The College has a requirement of 350 phacoemulsification cases for completion of training, but many ophthalmologists feel they would like to gain more experience before confidently starting a consultant role. Particularly in the post COVID era, where surgical training may be limited, this placement provides an excellent opportunity to increase surgical numbers, develop one's surgical technique on cases of varying complexity from the pooled lists, progressively gain independence in running unsupervised lists, manage complications effectively, and gain confidence in safe and efficient decision making both in clinic and in theatre.

Miscellaneous

PP494

National virtual ophthalmology course for medical students: The norm for the future?

Presenting author: Tsz Lun Ernest Wong, United Kingdom

Purpose:

The COVID-19 pandemic in the year 2020 has inadvertently led to a great increase in the use of virtual platforms for medical education globally. Medical students have a wide-ranging exposure to ophthalmology across the United Kingdom, where ophthalmology placements varies from a few weeks to a few hours in some medical schools. We organized a virtual, national ophthalmology course for medical students and sought feedback before and after the course.

Setting:

This virtual, national course was a free online course, delivered over 1.5 hours through a videoconferencing software.

Methods:

The aim of the course was to help medical students understand the diagnosis and management of common ophthalmic emergencies. Students from all medical school years in the U.K. were invited via emails from their medical school, university societies and through social media. Delegates completed a pre- and post-course survey to gather demographic information, as well as quantitative and qualitative course feedback. The session employed an interactive case-based learning approach, during which, students were asked questions and discussed answers.

Results:

394 students from 16 medical schools in the U.K. responded to the pre-course survey. Although students from all years completed the survey, majority (46%) were final year students. The students had a range of 21 specialty preferences they hoped to specialize in. 62 students from 12 medical schools completed the post-course feedback. The students had overwhelmingly expressed an improvement in confidence across all subject areas taught in the course ($p < 0.05$). Greatest improvement in confidence was seen in recognition and management of hyphaema, keratitis and acute angle-closure glaucoma.

Conclusions:

Virtual courses can be a cost-effective, convenient and efficient way of delivering high quality teaching to many students across the country. We believe the virtual platform is the future of medical teaching. We are in the process of expanding the course to include more topics and reach a wider audience. Previous studies have identified variable coverage of certain specialties, such as ophthalmology, by medical curriculums, with some students receiving little education; national virtual courses can be a cost-effective method to address these learning needs among medical students.

Miscellaneous

PP495

Impact of Simulation on Restarting Surgeries during Covid 19 Pandemic – Trainee Simulation Survey Results

Presenting author: Salman Sadiq, United Kingdom

Purpose:

There is available evidence that simulation training using artificial model eyes and EyeSi® surgical simulators has significantly helped trainees develop cataract surgery skills by speeding up the learning curve. However, role of simulation in assisting relatively experienced trainees to restart surgery after getting deskilled due to gap in operating like after COVID pandemic needs to be established. Therefore, this survey aimed to get insight into the role of simulation if any on restarting cataract surgery, and gain trainee perspective on how simulation training can be improved to avoid getting deskilled.

Setting:

Three tertiary level training units under Northern School of Ophthalmology in United Kingdom(UK) Royal Victoria Infirmary, Newcastle, Sunderland Eye Infirmary, Sunderland and James Cook University Hospital, Middlesbrough.

Methods:

Online survey comprising of 22 questions using SurveyMonkey® platform was distributed amongst the trainees from the aforementioned units. Responses were collected over a 2-week period. Two 4-months periods were defined. First period was the time of lockdown when either no or fewer phaco-cataract surgeries were performed in any of the training units(April – July 2020). The second time period was post-lockdown when the surgeries were restarted in the individual training units (August – November 2020). Trainees from all three units had access to similar simulation training facilities.

Results:

Out of 18 trainees who completed survey, most(78%) were experienced in performing phacocataract surgery with median of 279(range:112–793)surgeries performed prior to lockdown. Median surgeries performed during lockdown period was 2(range:0–19), and post-lockdown was 7(range:0–65).Trainees expected to have done median of 40(range:0–140)surgeries during the first period if pandemic hasn't hit. Following resumption of surgery most trainees (78%) struggled in performing at least some steps of surgery especially capsulorhexis(30%) and sculpting/cracking(35%). On average trainees spent 4 hours on EyeSi® during the lockdown period with half of them reported a great deal of benefit of simulation in resuming cataract surgery, and one-third felt moderate benefit.

Conclusions:

COVID pandemic has had negative impact on surgical training. Trainees missed out opportunity to operate during lockdown and experienced difficulty in resuming surgery leading to further reduced numbers. Trainees felt supervised EyeSi® simulation training would prove more beneficial than training in solitude. The survey results highlight the importance of simulation-training for relatively experienced surgeons in minimising their risk of getting deskilled due to any gap in performing surgery. Trainees who are planning to undertake out of program activities like research jobs e.t.c should engage into regular simulation training to help maintain their acquired skills.

Miscellaneous

PP496

Medical students' perception of ophthalmology training in the UK – a national survey

Presenting author: Imran Janmohamed, United Kingdom

Purpose:

Choosing a career path is a daunting task for medical students. Naturally, this choice often stems from personal experience, interest in the subject or interactions with older peers. However, it is well documented that exposure to ophthalmology has considerably diminished within hospital placements and the medical curriculum, compared to other areas of general medicine. It has been postulated that this may explain why students' interest to pursue ophthalmology, their appreciation of what a job in ophthalmology entails, and their efforts to create networks start late.

Setting:

United Kingdom medical schools

Methods:

31 medical schools were contacted to participate in our study, of which 14 medical school ophthalmology societies consented to distributing our 13-question questionnaire. Responses were collected over a period of eight weeks following an average of two rounds of local advertising.

Results:

71 responses were received, of which 61% were from four medical schools including Imperial College London, Kings College London, Leeds and Manchester. 45.8% said that they were “somewhat likely,” to apply for ophthalmology training in the future, while 25% responded with “very likely”. The main factor which sparked an initial interest in ophthalmology was a good experience during ophthalmology placements. Career flexibility and intellectual stimulation were the most important factors influencing students to pursue ophthalmology, whilst competitiveness of the specialty application was by far the main deterrent. Interestingly, the main perceived expectation from ophthalmology applicants was being well published.

Conclusions:

This study looked at medical students' perception of ophthalmology as a career. Whilst factors such as career flexibility and intellectual stimulation were important factors in determining students' choice for specialty training, many respondents believed ophthalmology to be competitive and this may potentially deter them from applying in the future. It is vital to prioritise ophthalmology within the clinical experience. Encouraging exposure to the field through alternative avenues such as taster sessions, guest speakers and optional modules may further improve confidence levels when approaching specialty applications and prepare students for challenges they may face with common eye conditions as doctors.



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Miscellaneous

PP497

Comparison of Conventional versus Electronic Methods for Ophthalmology Residents Assessment

Presenting author: Hamidreza Hasani, Iran, Islamic Republic of

Purpose:

To compare electronic and conventional assessment methods in ophthalmology residents.

Setting:

Ophthalmology department, IUMS

Methods:

Logbook, residents' attendance, scholarship and research skills, journal club, outpatient department participation, Multiple Choice Question (MCQ), Objective Structured Clinical Examination (OSCE), and professionalism embedded with 360-degree as eight different conventional methods implemented in 20 ophthalmology residents of four grades were obtained. Electronic examination consisted of online Patient Management Problem (e-PMP) and modified electronic OSCE (me-OSCE) tests were taken one week later. These two methods were intergroup and intragrouply compared.

Results:

This study comprised Twenty ophthalmology residents in different grades. In electronic part assessment, average e-PMP scores (45.21 ± 10.12) were much lower compared to me-OSCE (69.15 ± 15.23). The total average electronic score was 59.51 ± 10.11 while the total average conventional score was 76.32 ± 6.86 . Female and male residents' average score in electronic and conventional method was (51.21 ± 11.62 versus 79.12 ± 5.73) and (50.32 ± 9.36 versus 80.21 ± 7.13), respectively. Correlation between modified electronic OSCE and all conventional methods was insignificant (P -value > 0.05). The overall correlation between conventional and electronic methods was statistically significant. (P -value = 0.024).

Conclusions:

e-PMP and me-OSCE as are good replacement tool for conventional methods for evaluation of ophthalmology residents.

Miscellaneous

PP498

A study on Ophthalmic prescriber confidence and awareness of safe Ophthalmic medicine prescribing during pregnancy and breast feeding

Presenting author: Rinoza Muhammed Bafiq, United Kingdom

Purpose:

To assess the confidence and awareness of ophthalmic prescribers including Ophthalmologists, nurse prescribers and optometrists regarding safe prescribing specifically antibiotics, antiglaucoma medications, mydriatics and steroids in pregnancy and breast feeding.

Setting:

Princess Alexandra Eye Pavilion, Edinburgh

Methods:

The study was conducted between December 2020 to January 2021. A proforma of ten questions was circulated by email and mobile links using Survey monkey tool. First question was on the prescriber grade and next eight questions were about the confidence of prescribing medications during pregnancy and breast feeding. The last question was on the preference of the prescribers to display a chart containing safe medications in the clinical area.

Results:

Thirty out of sixty-three prescribers completed the proforma. 21% of them were confident in prescribing antiglaucoma medication in pregnancy and 31% in breast feeding. Confidence in prescribing antibiotics was 34% in pregnancy and 38% in breast feeding respectively. Thirteen prescribers stated that they were confident in prescribing steroid in pregnancy while twelve were confident during breast feeding. More than half the respondents were confident in prescribing dilating drops in pregnancy (62%) and breast feeding (55%). 29 out of thirty respondents preferred to have poster displays of safe medicine in pregnancy and breast feeding in clinical areas.

Conclusions:

Most prescribers felt less confident in prescribing anti-glaucoma medications, antibiotics and steroid in pregnancy and breastfeeding while majority of them were more confident to prescribe dilating drops. Almost all of them preferred to display a safe medicine poster in clinical areas. Published data regarding the potential risks of ophthalmic medications to the mother and the foetus is limited in the literature. More research and publication in improving the awareness and confidence level of ophthalmic prescribers is warranted.

Miscellaneous

PP499

Risk and prognosis factors of retinal detachment during endophthalmitis: a study about 12 cases

Presenting author: Loubna EL KAISOUMI, Morocco

Purpose:

The aim of our study is to assess and describe the risk and prognosis factors of retinal detachment associated with endophthalmitis.

Setting:

Retinal detachment can be concurrent with the endophthalmitis or occur during its evolution. Different risk factors can be encountered, as the virulence of the germ, posterior capsular tear, a context of ocular trauma, the presence of an intra-ocular fore

Methods:

It is a retrospective descriptive study about 35 patients admitted in our department for endophthalmitis during a period of 2 years. We recenssed 12 cases of retinal detachment and analyzed the data using SPSS software v.23.

Results:

Retinal detachment was diagnosed at presentation in 7 of 12 patients and during follow-up in the remaining 5 patients. An ocular trauma was present in 50% of the cases, and 6 patients had a prior history of ocular surgery (cataract surgery in 33,3%, vitrectomy in 8,3%).An intra-ocular foreign body was encountered in 50% of the patients. Initial visual acuity was reduced to light perception in 45%.Clinically, the retinal detachment was total within 66% of the patients. The main prognosis factors were the age of the patient (more than 50 years), intra ocular foreign body, posterior capsular tear, and the delayed management.

Conclusions:

Retinal detachment during endophthalmitis is associated with a very poor visual outcome. The post surgical anatomic result is less satisfying when retinal detachment occurs during endophthalmitis. Thus, prevention is essential in this context and identifying the risk factors of developing a retinal detachment during endophthalmitis is mandatory.

Miscellaneous

PP500

Evaluation of the knowledge, attitude, and behaviour of ophthalmologists about adenoviral conjunctivitis transmission and treatment: An Online Survey for Turkish Ophthalmologists

Presenting author: GOZDE SAHIN VURAL, Turkey

Purpose:

To detect the prevalence of adenoviral conjunctivitis (AC) in the ophthalmologists, to obtain an overview of the treatment and prophylaxis of AC, and to analyze the data in the context of evidence-based treatment recommendations.

Setting:

Department of Ophthalmology, Ege University Medicine Faculty

Methods:

An online survey was sent to ophthalmologists in Turkey. It comprised 20 multiple-choice questions about the characteristics of the respondents, the individual AC history of the ophthalmologists, the approach to the AC of their practice, and their prescribing preferences in AC.

Results:

The respond rate was 45% in 500 ophthalmologists. The history of AC in ophthalmologists was positive in 46.7% (n:120) and negative in 53.3% (n:125). Recurrent attack was 16.2%. In first-line treatment, lubricants were chosen by 67.6%, povidone-iodine by 59.6%, topical antibiotics by 51.1%, antivirals by 29.3%, corticosteroids by 26.7%, and NSAIDs 4.9%. A total of 98.2% of the ophthalmologists preferred to furlough patients from work. The preferred prophylaxis was frequent hand washing/using gloves in 97.8%, disinfection of medical devices in 95.1%, the isolation of patient in 79.1%, hand hygiene with germicides in 58.7%, and switch to single-dose drops in 46.2%

Conclusions:

The findings of this survey demonstrated that the majority of Turkish ophthalmologists generally follow international guidelines for the management of AC. The treatment algorithm is still controversial, so ophthalmologists should be informed for development of treatment guidelines, in line with evidence-based recommendations. To have adequate knowledge about the fundamental properties of viruses is significant to control the propagation of the disease. The authors have no financial disclosure to declare.

Miscellaneous

PP501

In vitro antiseptic activity of three ophthalmic drops used as prophylactic treatment in cataract surgery

Presenting author: Marco R Pastore, Italy

Purpose:

In the era of antibiotic resistance, there is an increased interest in antiseptic solutions that might represent a reliable option for ocular surface disinfection. This study aims to compare for the first time the in vitro antimicrobial activity of three different antiseptic ophthalmic preparations used as a prophylactic treatment in cataract surgery.

Setting:

Eye Clinic, Department of Medical, Surgical Sciences and Health, University of Trieste, and Microbiology Lab, Department of Life sciences, University of Trieste.

Methods:

The antiseptic activity of IODIM (povidone-iodine 0.6% in hyaluronic acid vehicle), OZODROP (nanoemulsion with ozonated oil – concentration not specified), and DROPSEPT (chlorhexidine 0.02 % and Vitamin E TPGS 0.5%), was tested in vitro on six reference strains by time-killing assays. Viable cells were evaluated after 1, 15, 30 min; 2, 6, and 24 h exposure by seeding 100 µl of the suspension (or appropriate dilutions) on LB agar or Sabouraud-dextrose agar. All plates were incubated at 37 °C for 24 h and evaluated by manually counting the colonies.

Results:

IODIM solution showed a very rapid microbicidal activity: the number of viable cells for all the tested strains was under the detection limit (less than 10 CFU/ml) already after 1 min exposure, and this result was maintained at every incubation time. The rapid antimicrobial activity of PVP-I was not replicated when testing the other two antiseptics.

Conclusions:

The study reports the great efficacy in reducing bacterial load in a very short time of povidone-iodine 0.6% compared with other antiseptic preparations.

Miscellaneous

PP502

Introducing simple but effective measures to improve diagnosis to treatment wait-times in sight threatening endophthalmitis

Presenting author: Jesse Panthagani, United Kingdom

Purpose:

The diagnosis of postoperative endophthalmitis is considered a medical emergency requiring investigation and treatment within an hour of presentation, especially in severe cases. Early diagnosis and treatment is associated with better visual acuity outcomes for patients. The aim of this study was to reduce the time taken to treat patients presenting with suspected endophthalmitis at a tertiary referral centre in the UK.

Setting:

Birmingham and Midland Eye Centre – a large tertiary referral centre in Birmingham, West Midlands, United Kingdom.

Methods:

An interview of trainee Ophthalmologists based at the hospital (who most likely carry out procedures in Accident & Emergency) was carried out in September 2020. Data collected primarily included a qualitative assessment of the challenges faced with managing suspected endophthalmitis patients. Trainees (junior trainees in Years 1-3 and senior trainees in Years 4-7) were timed in order to gather the necessary equipment in order to prepare the antibiotic for intravitreal use (Ceftazidime, Vancomycin and Dexamethasone as per hospital guidelines) and the necessary equipment. A cut off of 20 minutes was given to gather all equipment.

Results:

21 doctors were interviewed. Themes generated from these interviews included: • Not confident in finding equipment efficiently • No common place to find equipment • Making the intravitreal drug treatments confusing and time consuming • Not sure where to find the guidelines for treating endophthalmitis. 4 trainees were timed (1 junior trainee and 3 senior trainees). 0% of trainees could collect the equipment within 20 minutes.

Conclusions:

Introducing simple measures in the department has improved the confidence of trainees in treating patients efficiently. These included: • A pre-made pack with all the equipment needed • A clear place where the equipment is stored in the department • YouTube videos made on how to prepare the intravitreal medications (Ceftazidime and Dexamethasone) • QR codes made available in department directing the surgeon on how to make the treatments • Guidelines made available to all staff clearly located in the department.

Miscellaneous

PP503

Endophthalmitis when wearing contact lenses

Presenting author: Soukaina Bouziane, Morocco

Purpose:

In front of the development of different types of contact lenses (CL) and the increase of the number of wearers, we are noting an expansion in the complications due to them. They vary between a moderate discomfort and serious damages threatening visual function, in particular infection which can be complicated by endophthalmitis. They are seen especially in prolonged wear and when the rules of hygiene and maintenance are not respected. The aim of our study is to establish the epidemiological and therapeutic characteristics of endophthalmitis complicating the wearing of contact lenses

Setting:

Adult ophthalmology department, August 20 hospital, Casablanca

Methods:

Retrospective observational study of a series of cases, carried out in our department over a period of 5 years : September 2014- September 2019

Results:

Our study identified 45 cases of endophthalmitis. The average consultation time was 4 days. Visual acuity was at counting finger at 1 meter for 14 patients, hand movements for 15 , and light perception for 16 patients. A corneal abscess was found for 45 patients. 37 patients had an hypopion. Ocular ultrasound showed membranes partitioning the vitreous in 12 patients. Corneal scratching was positive in 66.7%. The lens and the lens storage fluid study was positive in 71.1%. We started topical, systemic and intravitreal antibiotics for all the patients. The infection was controlled in 73,3% patients. 3 patients required evisceration.

Conclusions:

It is the responsibility of the prescriber and adapter to educate every contact lenses wearer about the potential side effects of the lenses, to perform an optimal fit and to insist on hygiene and compliance with recommendations for their handling.

Miscellaneous

PP504

Delayed diagnoses of *Acanthamoeba* keratitis in two contact lens wearers

Presenting author: Eva González Aquino, Spain

Purpose:

Reporting two cases of *Acanthamoeba* keratitis in contact lens wearers and describing their management and treatment. Case 1 is a 17-year-old woman who used contact lens and presented severe pain and vision loss in her right eye despite being treated with topical antibiotics for 15 days. Case 2 is a 41-year-old woman, also a contact lens wearer, who was initially misdiagnosed and treated for Herpes simplex keratitis, but the continuous pain and the lack of clinical improvement made us to think about another pathogen.

Setting:

University Hospital Complex of Albacete. Albacete. Spain.

Methods:

Case 1. On examination, best-corrected visual acuity (BCVA) in her right eye was hand motion and 20/20 in her left eye. The anterior segment examination shows 3+ injection of the conjunctiva/sclera and around the limbus and an epithelial defect centrally with a ring infiltrate with perineural infiltrates. Case 2. A month later of the beginning of treatment for Herpes, the patient complained yet of intense pain. Her BCVA was 20/30 in her right eye and 20/20 in her left eye. Slit lamp examination revealed 1+ injection of the conjunctiva, diffuse punctate epithelial erosions, and a multifocal subepithelial haze.

Results:

Case 1. Corneal scrapings were taken and propamidine and chlorhexidine were added. After 48 hours, the non-nutrient agar with *E. coli* overlay and calcofluor white were positive for *Acanthamoeba*. Then, dosage was reduced and prednisolone was added to her regimen. A year later, her BCVA was 20/200 and now she presents a stromal leukoma and is waiting for a keratoplasty. Case 2. It decided to take corneal scraping which was positive for *Acanthamoeba*, like confocal microscopy. So, the same treatment that in previous case was initiated. Nowadays, her BCVA is 20/400, inflammation persists and pain is controlled for pain unit.

Conclusions:

The clinical presentation of *Acanthamoeba* keratitis may closely resemble other causes of keratitis and continues to be misdiagnosed, leading to delayed diagnosis and treatment. However, given the significant morbidity and challenging treatment course for *Acanthamoeba* keratitis, it is important for clinicians to maintain a high suspicion for *Acanthamoeba* and to consider obtaining cultures in contact lens wearers with atypical keratitis prior to making a diagnosis of Herpes simplex keratitis.

Miscellaneous

PP505

Endophthalmitis-Like Reaction Following an Intravitreal Injection of Triamcinolone Acetonide

Presenting author: Mehdi khamaily, Morocco

Purpose:

Pseudo endophthalmitis is a rare entity, described after intravitreal injection of Triamcinolone which manifests itself at the latest on the 3rd day, by a painless eye hyperemia, paradoxically with intra inflammation significant eye piece associating a pseudo-hypopion.

Setting:

Pseudo endophthalmitis is a rare entity, described after intravitreal injection of Triamcinolone which manifests itself at the latest on the 3rd day, by a painless eye hyperemia, paradoxically with intra inflammation significant eye piece associating a ps

Methods:

We report the case of a patient followed for macular edema after cataract surgery, in whom we asked for an intravitreal injection of Triamcinolone acetonide (TA).

Results:

Since the day 1 after intra vitreal injection of TA, the patient presented a pseudo endoph which regressed well under local treatment based on corticosteroid

Conclusions:

The pseudo endophthalmitis can often have a favorable prognosis, which should not be confused with true infectious endophthalmitis.

Miscellaneous

PP506

Rosacea Like Ocular Demodex Infestation at Young Age - Case Report

Presenting author: Çisil Erkan Pota, Turkey

Purpose:

To report a case of young patient with demodex related keratoconjunctivitis, who had dermatological lesions similar to acne rosacea. He had been considered as viral keratoconjunctivitis for a long term and had antiviral treatment. We report a 11 year old male patient who had complaints of redness, pain and lacrimation in his left eye for 1 year. He had treatment in different clinics against herpes virus.

Setting:

Akdeniz University Hospital Ophthalmology Department

Methods:

At the initial examination best-corrected visual acuity was 20/20 at right eye, 20/50 left eye. Biomicroscopical examination: Left eye had seboreic blepharitis, conjunctival hyperemia, punctate epithelial defect and 360 degree limbal vascularization. Other examinations were totally normal. The patient was having skin lesions similar to papulopustular eruption on his back and tip of his nose. We applied dexamethasone eye drops, artificial tear eye drops, oxytetracycline ophthalmic ointment and autologous serum eye drops and eyelid shampoo to the patient. We consulted the patient to dermatology due to the lesions which considered as acne rosacea.

Results:

One week after the treatment patient had less complaints about lacrimation and irritation. Visual acuity of left eye increased to 20/28.5. After determination of demodex as a result of skin surface biopsy, dermatology started the treatment of permethrin skin cream, oxytetracycline cream and adaferin gel. According to received information from dermatology department, demodex and acne rosacea are the diseases that could commonly seen together. Primary acne rosacea not considered due to the patient's age and gender (The youngest acne rosacea patient at the literature was 14 year old) After 2 weeks of treatment the visual acuity was 20/20 for both eyes and skin lesions regressed.

Conclusions:

Demodex is a genus of mites that has a role in facial rosaceas, blepharitis and even keratoconjunctivitis development. Cutaneous symptoms were collarette accumulation at the base of the lashes likely corresponding to the cylindrical dandruff described in ocular demodicosis. Young patients with chronic red eye and corneal vascularization generally diagnosed as atopic disease or herpetic disease and treated with chronic steroids. In our case demodex related keratoconjunctivitis was diagnosed in the patient with seboreic blepharitis who had been considered as viral keratoconjunctivitis for a long term. We recommend detailed examination of skin lesions at the patients having ocular complaints accompanying dermatological findings, even at young age.

Miscellaneous

PP507

Conjunctival tuberculosis following a trauma with a turkey's feather : a case report

Presenting author: Sana Khochtali, Tunisia

Purpose:

To report a case of a female patient with conjunctival granuloma as a manifestation of ocular tuberculosis, following a trauma with a turkey's feather.

Setting:

Department of Ophthalmology, Fattouma Bourguiba University Hospital, Monastir, Tunisia.

Methods:

A 18-year-old female patient presented with left eye complaints of tearing and redness for 3 months after a mild ocular trauma with a turkey's feather. Best-corrected visual acuity was 20/20 in both eyes. Slit-lamp examination of the left eye showed a vascularized lesion with a polypoidal appearance due to multiple contiguous micronodules on the temporal and inferior bulbar conjunctiva. No masses were seen on eversion of eyelids, and there was no lymphadenopathy in the head and neck region. Findings of anterior and posterior segment examination were otherwise unremarkable in both eyes.

Results:

Stains for bacteria, fungi, acid-fast bacillus, and spirochetes were negative. Cultures were negative. Histologic specimen of conjunctival mass biopsy showed caseating neutrophilic granulomas with chronic, compact aggregates of activated macrophages (epithelioid cells) and giant cells. Mantoux test was positive with a 15-mm induration. There was no evidence of pulmonary tuberculosis. The patient received anti-tubercular therapy. Three months after treatment initiation, the conjunctival lesions had markedly regressed.

Conclusions:

Tuberculosis may rarely be the cause of chronic conjunctival granuloma. It may be initially overlooked. Biopsy is critical for the diagnosis of primary conjunctival granuloma.

Miscellaneous

PP508

Intrastromal caspofungin and amphotericin B treatment for corneal perforation induced by fungal keratitis: a case report.

Presenting author: Sofía Corte-Alonso, Spain

Purpose:

To report clinical evolution and results after intrastromal caspofungin and amphotericin B therapy in a case of fungal keratitis with corneal perforation since there is not enough evidence about this clinical practice.

Setting:

Fundación Jiménez Díaz University Hospital, Madrid (Spain).

Methods:

A 18-year-old contact lens wearer woman with a history of infectious keratitis with poor clinical evolution after one month antibiotic therapy with fortified eye drops and topical voriconazole presented to the emergency department. Slit-lamp examination showed ciliary injection, a full-thickness corneal infiltrate with satellite lesions and in contact with the anterior capsule, positive Seidel test, great fibrinous anterior chamber reaction and athalamia consistent with corneal perforation. Corneal-scrape samples were collected and direct microscopy examination revealed presence of yeast which afterwards did not grow in the culture so antifungal susceptibility testing could not be performed.

Results:

Patient underwent penetrating keratoplasty followed by anterior chamber wash, intracameral alteplase and intrastromal injections of voriconazole 50µg/0.1ml. Topical treatment with natamycin 5% every hour and ceftazidime 5% every six hours was added. No improvement of the infection was observed and due to the suspicion of voriconazole resistance a combination of intrastromal, intracameral and subconjunctival caspofungin 250µg/0.1ml and amphotericin B 20µg/0.1ml was administered. Subsequently intrastromal and intracameral caspofungin 250µg/0.1ml injections were administered every 48 hours until infection was controlled and there were no signs of active inflammation. The patient presented favorable evolution with ocular infection healing and eye function preserved.

Conclusions:

Intrastromal, intracameral and subconjunctival injection of caspofungin combined with amphotericin B seems to be safe and effective in the treatment of fungal keratitis with corneal perforation. Despite these case shows good results, randomized controlled trials are necessary to confirm effectiveness and safety.

Miscellaneous

PP509

Effect of Intracameral Bevacizumab Injection after Sterilization of Severe Fungal Keratitis with Iris Neovascularization: A Case Report

Presenting author: Chan-Ho Cho, Korea, Republic of

Purpose:

Iris neovascularization (NVI) associated with infectious keratitis can lead to additional complications such as increased intraocular pressure, neovascular glaucoma, iris atrophy and iris adhesion. The aim of this study is that intracameral anti-VEGF injection can be used as treatment for NVI, but the timing should be carefully determined considering the possibility of transmission of the infection to the intraocular tissues.

Setting:

A 47-year-old man was treated for a month at other hospital for an injury to a tree branch in his right eye, but despite the administration of fortified antibiotic eye drops, the corneal lesion had worsened and was referred to our hospital.

Methods:

Initial slit lamp findings showed a large, thick central stromal infiltration with concentric circle shaped feathery-like margin, deep stromal infiltration, satellite lesion, extensive endothelial plaque, hypopyon, and NVI. Hyphae was positive on the KOH smear and *Aspergillus fumigatus* was detected in the corneal scraping culture, therefore it was diagnosed as fungal keratitis. Amphotericin B, voriconazole, natamycin were administered topically, and systemic amphotericin B were administered. After 4 weeks of treatment, corneal lesions gradually improved, but NVI was increased. At the 5th week, total hyphema was occurred, and anterior chamber irrigation and intracameral bevacizumab injection (25 mg/mL, 0.15 cc) were performed.

Results:

At 1 week postoperatively, NVI was decreased, and at 2 weeks, NVI was completely resolved. There was no recurrence of NVI until 2 months postoperatively. Corneal lesions healed with gradual epithelial regeneration and left extensive corneal opacity. At 3 months of treatment, corneal stromal melting with descemetocoele occurred in the part where the site of persistent epithelial defect, and a penetrating keratoplasty was performed. During open-sky stage of operation, it was possible to observe the complete loss of NVI in the central iris under a surgical microscope. NVI was no longer observed until 3 months after keratoplasty.

Conclusions:

In this case, after treatment for fungal keratitis, an intracameral bevacizumab injection was observed to reduce NVIs without further complication such as transmission of infection to the corneal incision site. It is considered effective to administer bevacizumab injection in anterior chamber when NVI occurs in infectious keratitis, and it is preferable to try after sufficient sterilization treatment rather than the initial stage of treatment.

Miscellaneous

PP510

Incidental finding of ocular toxocariasis in adult : a case report

Presenting author: Loubna EL KAISOUMI, Morocco

Purpose:

Ocular toxocariasis is due to an ascarid nematod, *toxocara canis* or *cati*. It usually occurs among children, and it affects uncommonly adults. The purpose of our case report is to underline the possibility of incidental findings of ocular toxocariasis, especially among adults.

Setting:

A 38-year-old diabetic women presented to our department for her annual fundus exam. The patient didn't report any ocular symptoms. Her ocular history was unremarkable.

Methods:

A 38-year-old diabetic women presented to our department for her annual fundus exam. The patient didn't report any ocular symptoms : she didn't complain of visual acuity loss, she denied ocular pain, or floaters, or any other ocular symptom. The examination of the right eye was 20/20, no sign of anterior uveitis. The fundus examination showed an infero-temporal peripheral granulomatous lesion with fibrotic strands, and minimal vitritis. The slit lamp and fundus examination of the left eye were normal.

Results:

A 38-year-old diabetic women presented to our ophthalmologic department for her annual fundus exam. The patient didn't report any ocular symptoms as she didn't complain of visual acuity loss, she denied ocular pain, or floaters, or any other ocular symptom. The examination of the right eye was 20/20, no sign of anterior uveitis. The fundus examination showed an infero-temporal peripheral granulomatous lesion with fibrotic strands, and minimal vitritis. Rechecking the anamnesis, we discovered that the patient had close contact with dogs, as she was living in a rural area. ELISA detection of *Toxocara canis* serum antibodies was positive. We didn't test it on the aqueous humour.

Conclusions:

Ocular toxocariasis is uncommon among adults. It usually causes ocular inflammation, especially posterior and peripheral granuloma, and sometimes it can even cause endophthalmitis, retinal detachment causing a visual impairment that impose medical and surgical treatment. Prevention and awareness concerning this disease should be raised to avoid complications and visual loss.

Miscellaneous

PP511

Amniotic membrane transplantation in non-healing corneal ulcers: relationships among amniotic membrane layers transplanted, success, and visual acuity gain.

Presenting author: Javier Lacorzana, Spain

Purpose:

To evaluate the relationships among numbers of amniotic membrane (AM) layers transplanted, success rate and visual acuity (VA) gain for non-healing corneal ulcers (NHCUs).

Setting:

Spain

Methods:

Retrospective, multicenter study. In total, 223 AMTs for NHCU in 191 patients were assessed. The main outcomes studied were the number of AM layers transplanted, success rate of AMT (complete re-epithelization), and postoperative visual acuity (VA) gain.

Results:

Monolayer and multilayer AMTs were performed in 65.5% (146/223) and 34.5% (77/223) of the cases, respectively. The success rate was higher in the monolayer (79.5%) than in the multilayer AMTs (64.9%) ($p = 0.018$). Statistical relationship between the number of AM layers and success rate according to ulcer etiology was found with post-herpetic ($p = 0.043$) but not with the other etiologies (Table). Although postoperative VA was significantly higher than preoperative VA in the entire cohort ($p < 0.001$), no statistically significant values were found between the number of layers transplanted and VA gain ($p = 0.509$).

Conclusions:

AMT is not only beneficial in achieving complete re-epithelialization in NHCUs but also in improving postoperative VA. Furthermore, the use of monolayer AMT seems to be a more appropriate option than multilayer AMT for NHCU since multilayer AMT did not present better outcomes (success rate and VA gain) compared to monolayer AMT in the different types of ulcers studied.

Miscellaneous

PP512

Is the frequency of bilateral acute iris depigmentation cases increasing after Covid-19 pneumonia?

Presenting author: Seda Liman Uzun, Turkey

Purpose:

We aimed to present the clinical characteristics of our patients who developed bilateral acute iris depigmentation (BADI) syndrome due to oral moxifloxacin use during the treatment of COVID-19 pneumonia.

Setting:

Fethi Sekin City Hospital, ELAZIG, TURKEY

Methods:

Twelve eyes of 6 patients who presented to our clinic with photophobia, pain, and redness were evaluated. All cases were treated with favipiravir and moxifloxacin for COVID-19 pneumonia. Best-corrected visual acuity (BCVA) (Snellen), biomicroscopy, intraocular pressure (IOP), gonioscopy, and fundus examination findings of the cases were recorded. Photopic and scotopic pupil diameters (PD) were measured.

Results:

Four of the cases were male and 2 were female. The mean age was 46.2 ± 9.1 years. Symptoms started within an average of 8 ± 2 days after treatment. The mean BCVA was 0.8 ± 0.3 . Conjunctival hyperemia, diffuse iris depigmentation, floating iris pigments in the anterior chamber, and diffuse pigment accumulation in the angle were observed in all cases. The mean IOP was 18.1 ± 1.2 mmHg. The mean photopic PD was 3.5 ± 0.8 mm and scotopic PD was 5.2 ± 0.8 mm. Transillumination defect and atonic pupil were not observed in any of the cases. The signs regressed with topical prednisolone acetate in all cases.

Conclusions:

The BADI clinic associated with moxifloxacin, which frequency of use has increased during COVID-19 pneumonia treatment, should be kept in mind the differential diagnosis of acute iridocyclitis. Since nonspecific complaints such as pain, conjunctival hyperemia can also be seen in COVID-19 eye involvement, the differential diagnosis should be made carefully and systemic drug use should be questioned.

Miscellaneous

PP513

Analysis of ‘urgent’ cataract referrals from community optometrists in the West of Scotland

Presenting author: Jonathan Nairn, United Kingdom

Purpose:

Prioritising clinical needs following COVID-19 restrictions have resulted in re-mobilisation plans based on risk of harm due to delay. However, there is no system advising optometrists regarding urgency of cataract referrals, even prior to the currently restricted capacity. In Scotland, ophthalmic patients can only be referred to outpatient services as “urgent” or “routine”.

Setting:

NHS Greater Glasgow & Clyde Health Board. Estimated population 1,183,120 (2019)

Methods:

We performed a retrospective review of all electronic “urgent cataract” referral letters received in NHS Greater Glasgow & Clyde between 1st September 2018 and 31st August 2020 to identify documented evidence for this requested degree of urgency.

Results:

We identified 128 “urgent cataract” referrals in this 2-year period (average 5/month; range 1-14), comprising 66 females/62 males; median age 67.7 years (range 22-90). Best Corrected Visual Acuity was documented in 120 (93.7%), refraction in 111 (86.7%) and IOP in 94 (73.4%). Dense cataract was described in 31 (24.2%). 23 (17.9%) had BCVA less 6/18 (12 were less 6/60 (9.3%)). 72 (56.25%) had BCVA 6/12 or better. 92 (71.8%) had subjective comments, including “driver” (16.4%), “recent falls” (15.6%), “unable to work/perform daily activities” (10.9%), “only eye” (6.3%), terminal ill-health (2.3%), and “carer” (1.6%). The surgery conversion rate was 86.7% (111/128).

Conclusions:

Our study has demonstrated variability in the quality of the objective and subjective information provided in “urgent cataract” referrals from community optometrists in West of Scotland. We propose objective referral guidelines are developed to ensure best utilisation of cataract service capacity with appropriate prioritisation for those patients with greater levels of visual impairment post COVID-19 restrictions.

Miscellaneous

PP514

Corneal transplants during COVID-19 pandemic – a tertiary referral centre experience

Presenting author: Catarina Guedes-Mota, Portugal

Purpose:

The emergence of a novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has led to a devastating impact on corneal transplantation worldwide. Corneal blindness is a leading cause of blindness and transplantation remains the only method of restoring vision in end-stage disease. In several countries ophthalmology departments have been either placed in lockdown or reorganized into COVID-19 units. Additionally, reduced access to emergency care and decreased corneal tissue retrievals have resulted in a significant reduction in transplantation activity. The aim of our study is to analyze the impact of COVID-19 pandemic on corneal transplantation in a tertiary referral centre.

Setting:

Cornea and Transplants Unit – Ophthalmology Department – Lisbon Central University Hospital Centre, Portugal

Methods:

Retrospective review with descriptive qualitative and quantitative analysis of corneal transplant-related activities data during the year of 2020. Records were reviewed in a retrospective chart built for the purposes of this study and compared to data from the last five years.

Results:

From 2015 to 2019, the mean number of corneal transplantation procedures was 148 per year. In 2020, a total of 86 procedures were performed, which represents a 42% decrease. Comparing with the same period from the past five-years, the most affected months were June and August, registering 0 transplantations, followed by April, May, October, March and December, with a reduction in transplantation activity of 93.0%, 62.1%, 51.0%, 48.9% and 48.3%, respectively. In 2020, 106 patients were registered on the waiting list for corneal transplant and 62.2% (n=66) were transplanted. The number of corneas collected from January to December was 112.

Conclusions:

Updated guidelines from major eye banks excluding donors infected with COVID-19 along with curtailed elective procedures led to a reduction in the supply, retrieval and demand for corneal transplantation worldwide. The results presented in our study are in line with global trends. The fact that more than a third of the patients registered on the waiting list for corneal transplant in 2020 were not treated illustrates this topic and is a major concern. The impact of COVID-19 on corneal transplantation may have long-lasting effects.

Miscellaneous

PP515

Comparison of Amino acid Levels in Aqueous Humor and Plasma in Patients with or without Pseudoexfoliation Syndrome

Presenting author: Erman Bozali, Turkey

Purpose:

To evaluate and compare amino acid levels in aqueous humor and venous blood samples obtained simultaneously in patients with or without pseudoexfoliation (PEX) syndrome.

Setting:

Sivas Cumhuriyet University School of Medicine, Department of Ophthalmology, Sivas, Turkey

Methods:

A total of 70 patients who had decreased visual acuity and diagnosed with cataract were enrolled in this prospective study. Group 1 consisted of 35 cataract patients with PEX syndrome and Group 2 consisted of 35 cataract patients without PEX syndrome. Levels of 27 amino acids (alanine, arginine, asparagine, aspartate, citrulline, gamma-aminobutyric acid, phenylalanine, phosphoethanolamine, glycine, glutamine, hydroxylysine, histidine, homocystine, isoleucine, lysine, leucine, methionine, ornithine, proline, hydroxyproline, serine, cystine, taurine, threonine, tyrosine, tryptophan, and valine) were measured using the Liquid Chromatography with Tandem Mass Spectrometry (LC-MS / MS) method in all samples including aqueous humor and plasma.

Results:

Both groups were similar regarding age and gender ($p>0.05$, for all). Aqueous humor tryptophan, leucine, alanine, taurine, lysine, glutamine, histidine levels were lower in patients with PEX syndrome compared to patients without PEX syndrome ($p<0.05$). However, no significant difference was found in terms of remaining 20 amino acid levels between groups ($p>0.05$). Also, plasma amino acid levels were similar between two groups ($p>0.05$, for all amino acids).

Conclusions:

Increased abnormal extracellular matrix proteins and elastic microfibrillar components, which play a fundamental role in the pathogenesis of PEX syndrome, may result in alterations in amino acid levels of aqueous humor independent of plasma levels.

Miscellaneous

PP516

Digital tools for the self-assessment of visual acuity: a systematic review

Presenting author: Janneau Claessens, Netherlands

Purpose:

The recent COVID-19 pandemic underlined the need for high-quality remote care. Digital tools for self-assessment of visual acuity increase the access to eye care and avoid the burden for patients in quarantine, with poor mobility, or without means of transportation. A plethora of digital tools to self-assess visual acuity is available on the internet and in mobile app stores, which impedes choosing which tools are the most effective and reliable. This review gives a current overview of digital tools for assessing visual function and reports on their effectiveness.

Setting:

Systematic review.

Methods:

We searched the databases of Embase and Pubmed, and systematically reviewed the literature, conform PRISMA guidelines. Two preliminary papers were added from medRxiv.org. The main outcome was the agreement of the digital tools with conventional wallcharts, as expressed by mean differences and 95% Limits of Agreement (95% LoA).

Results:

Fourteen included studies reported on 11 different digital tools. Most of the tools focus on distance visual acuity. The mean differences of the digital tools ranged from -0.08 to 0.10 logMAR, when compared to traditional wallcharts. The 95%LoA differed considerably between studies: from ± 0.08 logMAR to ± 0.47 logMAR. Subgroup analyses demonstrated that the measurement accuracy of the digital tools was higher for better visual acuity ranges.

Conclusions:

The low mean differences between digital visual acuity assessments and reference charts suggest clinical equivalence, though the wide 95%LoAs identify a lower precision of digital unsupervised assessments. This effect diminishes in individuals with better visual acuities; a common feature of visual acuity assessments. Digital testing with mobile technology has many advantages that outweigh accuracy. Traditional visual acuity testing requires patients to physically attend a clinic and consumes substantial hospital resources. There is great potential for digital tools to increase access to eye care and we expect the accuracy of the current tools to improve with every iteration in technology development.

Miscellaneous

PP517

Effect of cataract surgery in the tear film – Osmolarity, Schirmer's test I and visual break-up time

Presenting author: Catarina Castro, Portugal

Purpose:

To evaluate the impact of cataract surgery in the tear film 1 month after cataract surgery and 2 months after the end of topical postoperative treatment.

Setting:

Ophthalmology Department - Centro Hospitalar Universitário do Porto, Oporto, Portugal.

Methods:

Prospective longitudinal analysis of patients submitted to bilateral cataract surgery, without other anterior segment pathology. Tear film osmolarity (Tearlab Corp.[®]), basal tear flow (BTF, Schirmer's test I with anesthetic eye drops) and Visual Break Up Time (VBUT, HD Analyzer, Visiometrics[®]) were evaluated. One eye was compared before and 1 month after surgery and the fellow eye was compared 1 and 3 months after surgery. All surgeries and measurements were performed by the same experienced surgeon. Topical treatment was stopped 1 month after surgery.

Results:

The study included 140 eyes of 70 patients (mean age 72.8±6.3). One month after surgery, there was an increase in BTF ($\Delta= 1.7\pm 5.8$, $p= 0.04$) but no differences in osmolarity ($p=0.199$) or VBUT ($p=0.114$). Between 1 and 3 months after surgery, there were no differences in BTF, osmolarity or VBUT ($p\geq 0.181$ for all). When preoperative osmolarity was over the normal limit, there was a decrease in osmolarity ($p<0.01$) and an increase in BTF ($p=0.035$) after surgery, but not to normal levels. Results were similar comparing 1 and 3 months after surgery.

Conclusions:

Many studies report that cataract surgery can exacerbate dry eye disease. Despite this, our results show that there is an increase in basal tear film flow after cataract surgery. Interestingly, patients with abnormal osmolarity or BTF before surgery had an improvement of these parameters. These changes were also present 3 months after surgery, after two months without topical treatment.

Miscellaneous

PP519

Eyebus as a screenings mobile eye care.

Presenting author: Zahra Javdani, Belgium

Purpose:

Eye Bus can be a mobile ophthalmic screening service that aims to detect chronic ophthalmic diseases like glaucoma, macular degeneration, and other ophthalmological diseases in the Belgium population. Screening and, if indicated, referral for further treatment to an ophthalmologist.

Setting:

In an Eye Bus try-out located at Brussels Airport between 19/06/2019 and 14/07/2019.

Methods:

In an Eye Bus try-out, 500 individuals with average age of 43,5 and between 21-82 years (173 women, 327 men), were chosen systematically and were invited to participate in the study. After enrolment 5 of them were excluded, 495 participants remained (172 women 323 men). Participation rate was 99%. The participants had ophthalmologic exams including slit lamp biomicroscopy and fundus photography, optic coherence tomography, and tonometry examination. In this retrospective cross sectional study we are sharing our OCT results, and comparison with other diagnostic tests is needed for ophthalmological screening.

Results:

Incidence of maculopathy only in right eye 53 (10,60%), only in left eye 43 (8,60%) and in both eyes 27 (5,40%). The incidence of suspicion of optic nerve abnormality in only right eye 100 (20,00%), in only in left eye 119 (23,80%) and in both eyes 75 (15,00%) were measured. There was an excavation of more than 0.5 only in right eye 44 (8,80%), only in left eye 38 (7,60%) were observed. An excavation of more than 0.5 in at least one eye associated with an asymmetry of 0.2 between both eyes were observed in 41 cases (8,20%).

Conclusions:

It is maybe difficult to make a statement about the exact impact, but it may be a rather surprising and sobering observation that such a large group in the population has ophthalmic disease that tends to go unrecognized, even with people younger than 43. By using low-key, low-cost screening outside the medical system, such disease may be detected in a much earlier phase, and it stands to reason that even though the initiative has only recently been started, a huge number of patients may already have benefited.(treated in an early phase, not in a more advanced, possibly intreatable phase).



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PP520

An Ophthalmologic Nightmare: Traumatic Enucleation

Presenting author: onur furundaoturan, Turkey

Purpose:

To point out a traumatic enucleation as a rare catastrophic ophthalmic condition

Setting:

This case report conducted in Ege University Ophthalmology Department, Izmir, Turkey.

Methods:

To report a case of traumatic enucleation.

Results:

A 42-year-old head trauma patient multiple head bone fractures who needed an urgent neurosurgical intervention was admitted to the emergency room. Right globe was subluxated laterally. All of the extra ocular muscles were detached. Free avulsed optic nerve was present right behind the globe. Eyelids were formed without any major traumatic cutaneous laceration. Immediately after the neurosurgical operation, enucleated globe was removed from the orbit and the closure of Tenon's capsule and conjunctiva was performed. During the follow-up of the patient, no cerebrospinal fluid leak, rhinorrhea, wound infection and meningitis were observed.

Conclusions:

Globe avulsion is an unusual situation that generally occurred due to the severe orbital trauma which should be handled multidisciplinary.

Miscellaneous

PP521

A Diagnostic Bullseye

Presenting author: Brian Woods, Ireland

Purpose:

To highlight the continued importance of traditional diagnostic skills and thorough history taking in an era of high-tech ophthalmology

Setting:

Cork University Hospital, Cork, Ireland

Methods:

Case Report. A 32 YO lady was referred to eye casualty by her optician with decreased visual acuity in both eyes that was not amenable to spectacle correction. She had noticed decreased vision in both eyes over the preceding two months. She also described distortion that she had noted over the last 5 years. She had no other ocular or medical history of note and there was no significant family history of any ocular issues. On further questioning it was noted she had hemeralopia with her vision being worse during the day for years.

Results:

On examination vision was 6/36 and 6/18+1 on the right and left respectively with no improvement with pinhole. Anterior segment and IOP measurement was unremarkable bilaterally. Fundal examination revealed bilateral macular scarring in a bull's eye conformation with retinal flecks. OCT revealed subretinal fibrosis and intraretinal fluid bilaterally. FFA revealed window defects and late staining but no active leakage. A presumed diagnosis of cone dystrophy was made and the patient was sent for electrophysiology.

Conclusions:

Cone dystrophy is an overarching term for a heterogenous group of eye disorders that affect the cone cells of the retina. Mutations in over thirty genes have been identified. Typically, they present in the second or third decades of life with progressive symptoms including decreased visual acuity, colour vision loss and mild photophobia. Fundus findings vary and can range from mild pigment epithelial changes, bull's eye maculopathy or even advanced retinitis pigmentosa findings.



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PP522

Acute disorder of retinal microcirculation associated with COVID-19 after cataract phacoemulsification

Presenting author: Nina Lutsenko, Ukraine

Purpose:

To report a case of retinal microcirculation disorder presenting as acute macular neuroretinopathy (AMN) after uneventful phacoemulsification in the convalescence period of COVID-19.

Setting:

State Institution “Zaporizhzhia Medical Academy of Postgraduate Education Ministry of Health of Ukraine”

Methods:

A 56-year-old woman was examined after an acute loss of vision and fogging in the right eye. One month ago, she underwent cataract surgery on the both eyes. Visual acuity after surgery was 1.0 in both eyes. She reported COVID-19 associated pneumonia after the surgery. Fundus examination of the right eye showed features of central retinal vein occlusion (CRVO): multiple retinal hemorrhages in all quadrants and in the macula. Optical coherence tomography (OCT) and optical coherence tomography angiography (OCTA) was assigned in order to confirm or exclude the diagnosis.

Results:

Visual acuity of the right eye was 0,1. OCT demonstrated multiple hyperreflective foci at different levels: the inner nuclear layer/the outer plexiform layer (type 1 AMN or paracentral acute middle maculopathy) and at the outer nuclear layer with the involvement of photoreceptor zones (classical type 2 AMN). OCTA showed areas of nonperfusion at the level of deep retinal plexus and focal decreases in choriocapillary perfusion, corresponding to the localization of foci on OCT scans.

Conclusions:

AMN should be considered as a differential diagnosis in patients with suspected CRVO. The results demonstrate the role of capillary occlusions in the development of secondary AMN in the early post-infectious period after COVID-19.

Miscellaneous

PP523

Processed egg yolk supplementation for the treatment of dry eye disease and meibomian gland dysfunction – pilot study

Presenting author: Nuno Moura-Coelho, Spain

Purpose:

Current treatment modalities in the management of dry eye disease (DED) reflect its multifactorial pathophysiology. While dietary modifications have been advocated in the treatment of DED and meibomian gland dysfunction (MGD), the clinical benefits of processed egg yolk (PEY) supplementation in DED are unknown. Our aim was to analyze the benefits of a novel, oral PEY-based supplementation in DED and MGD.

Setting:

Two-centre private practices in Spain - Instituto Microcirugía Ocular (IMO) Barcelona, Clínica Rementería Madrid.

Methods:

Prospective, two-centre, noncomparative, interventional study. Patients with mild-to-moderate DED and MGD, on artificial tear drop treatment alone, and refractory to treatment underwent a 6-week period of oral supplementation with 500 mg PEY capsules (WEYE®). Pre-treatment data included demographic data, systemic and previous ocular treatments, ocular surface disease index (OSDI) score, tear break-up time (TBUT), basal tear secretion, and modified Oxford ocular surface staining grade. Outcomes analysed after supplementation with PEY capsules were changes in OSDI, TBUT, basal tear secretion, and ocular surface staining grade compared with baseline.

Results:

25 patients were included. After 6-week supplementation with WEYE capsules, statistically significant improvements from baseline were observed in median OSDI score (from 20.0 (IQR=16-25) to 15.0 (IQR=10-19); $p=0.001$) and in mean TBUT (from 6.08 ± 0.60 seconds to 7.80 ± 0.62 seconds; $p=0.004$), but not in mean basal tear secretion (from 5.88 ± 0.41 mm/5 min to 6.56 ± 0.47 mm/5min; $p=0.108$). Improvement in ocular surface staining grading was observed in 8 (32%) eyes. Worsening of OSDI scores and ocular staining grade were noted in 3 (12%) and 2 (8%) of patients, respectively.

Conclusions:

In our study, oral PEY-based supplementation significantly improved signs and symptoms in patients with mild-to-moderate DED and MGD. Our findings support the utility of dietary modifications the management of DED and MGD, improving ocular surface health and reducing the disease impact and treatment burden.

Miscellaneous

PP525

Hughes or Tenzel for lower lid reconstruction– adapting to the pandemic context

Presenting author: MADALINA Belibou, Romania

Purpose:

Presenting a series of cases that presented during the pandemic and benefited from surgical resection of malignant tumors of the lower lid with lid reconstruction.

Setting:

The case series presented was operated during March and Decembre 2020 to the "Sf. Spiridon" Emergency hospital Iasi that was the single centre in the north- east of Romania that responded to ophthalmology emergencies in the region during the pandemic. Thi

Methods:

We included 15 cases with lower lid tumors that were excised with significant tissue loss (more than 2/3 of the lower lid length), without the implication of the internal cantus. Choosing the surgical technique was dictated by the necessity to adapt to the clinical context and respect the pandemic norms. We include 9 cases witch benefited form lid reconstruction using the Tenzel flap and 6 cases with a transconjunctival Hughes flap. We accessed the Hospital database and performed a comparative study of the cases that benefited form either afore mentioned surgeries during march-december 2019 and 2020.

Results:

On a follow-up period ranging from 3-12 months no severe adverse events were noticed. The postoperative recovery and the hospitalization days were significantly reduced in patients with lid reconstruction in the Tenzel group. Patients which benefited from the Hughes reconstruction technique had favorable results but this technique involved a second presentation for sectionating the pedicle. By comparison with the same period of 2019, in 2020 the addressability of these cases was reduced 4 times. After the preoparetaive discussion about potential risks of the surgery in comparison with 2019, in 2020 additional 40% of patients prefer the Tenzel flap.

Conclusions:

The general conditions on the population induced by the pandemy and by the restrictions imposed caused the reduced addressability to the ophthalmological consultation and, implicitly, the numbered of oncological cases was significantly reduced. From the point of view of the functional and aesthetic postoperative result, both reconstruction techniques give good results in the medium term. The percentage of patients who underwent the Tenzel flap was increased due to the rapid recovery and the fact that no new intervention is required to dissect the vascular pedicle, thus reducing hospitalization days and reducing the risk of exposure to sars cov infection 2.

Miscellaneous

PP526

Hospital Costs Associated with Cataract Surgeries in Europe: A Comprehensive Literature Review

Presenting author: Zoltan Nagy, Hungary

Purpose:

As the demand for cataract surgery continues to grow across Europe, health care providers will turn to health technology assessments and economic evaluations as a means of assessing the value of emerging cataract interventions or determining optimal resource allocation. The purpose of this study was to conduct a comprehensive review of the literature to identify hospital costs associated with cataract surgeries in Europe that could be used to inform future analyses.

Setting:

Not applicable.

Methods:

A targeted search was conducted in Ovid EMBASE and MEDLINE for studies published between November 2014 and November 2019. Articles published in English that reported hospital costs (for diagnostics, procedures, monitoring, staff, facility, medications, anesthesia, consumables, complications, and administration/overhead) from Europe were included. Overall procedure-related costs were defined as the sum of costs accrued to diagnose, treat, and monitor a patient. All costs are reported in 2020 USD.

Results:

The search identified thirty-two costs reported in seven articles from Finland, Greece, Norway, Poland, and the United Kingdom. The average overall procedure-related cost was \$1,886.88 per case in Finland (based on the cost of one-eye, second-eye, and bilateral cataract surgeries) and \$806.71 in Greece. Overall procedure-related costs for complex cataract surgery ranged from \$1,433.09 (for uncomplicated surgery using surgical adjuncts) to \$3,227.03 (for complicated surgery requiring a vitrectomy) in the United Kingdom. Higher costs were reported for cataract surgery for younger patients versus elderly patients in Poland (additional \$500.23), and for intraocular lens exchange versus repositioning in Norway (additional \$297.95).

Conclusions:

Our review captured a variety of cataract surgery hospital costs from European countries that may be used when conducting economic analyses; however, it also highlights country- and procedure-specific data gaps in the literature. For example, hospital costs for cataract surgery were only available from five countries and costs for specific types of cataract surgery (eg, manual small-incision cataract surgery, phacoemulsification) were not identified. Future research should focus on the collection of hospital-related cataract surgery costs from additional European countries and on determining the costs for specific types of procedures.

Miscellaneous

PP527

A case series of orbital lymphomas: the eye as a gateway to systemic malignancy

Presenting author: Ayesha Karimi, United Kingdom

Purpose:

A wide variety of pathologies can produce space-occupying lesions in and around the orbit, including benign and malignant tumours, vascular lesions, inflammatory disease, congenital lesions, and infections. Lymphomas comprise 15% of all orbital masses and up to 55% of malignant orbital tumours. Median duration of symptoms for low-grade lymphoma subtypes have previously been found to be 6 to 24 months before ophthalmic opinion is sought. We describe six cases of lymphoma involving the orbit, their varying presentations and management.

Setting:

Six cases presenting to an ophthalmology department.

Methods:

Patients ages ranged between 59 to 78 years with presentations ranging from a 2-week to 2-month history of symptoms including eyelid swelling, proptosis, restricted eye movements, globe displacement and diplopia.

Results:

Initial treatments invariably consisted of oral or intravenous antibiotics for periorbital or orbital cellulitis. Investigations included protein electrophoreses, orbital biopsies, computed tomography, magnetic resonance imaging, positron emission tomography and skeletal surveys to determine the nature of the lesions and help in staging. A variety of orbital B-cell lymphomas including diffuse large B-cell lymphoma, follicular lymphoma, mucosa-associated lymphoid tissue lymphoma and plasmacytoma were found. Treatments included radiotherapy, chemotherapy and steroids depending on histological diagnosis and staging, with varying outcomes according to histological subtype, anatomical site involved and staging of the disease.

Conclusions:

Cases of orbital lymphomas are often initially treated as cellulitis, which may delay the diagnostic process. Suspicious cases warrant early subspecialty referral. Though the diagnosis is primarily based on histopathological verification through a biopsy, an extensive ophthalmic examination is essential. Knowledge of typical presentation including 'red-flag' signs, their appearance on imaging, and distinguishing features from other differential diagnoses may allow more rapid diagnosis and subsequent treatment.

Miscellaneous

PP528

Vitamin D status in cataract patients with myopia and glaucoma in Kherson region of Ukraine

Presenting author: Nina Lutsenko, Ukraine

Purpose:

To study the level of serum 25-hydroxyvitamin D in patients scheduled for cataract surgery

Setting:

State Institution Zaporizhzhya Medical Academy of Postgraduate Education Ministry of Health of Ukraine

Methods:

128 cataract patients of both sexes were examined for the 25(OH)D level. The study was conducted in Kherson region, Ukraine. All patients were divided on groups: age cataract (control) – 38 patients, cataract and POAG – 36 patients, cataract and high myopia – 54 patients. Inclusion criteria for high myopia group was the presence of axial length more than 24 mm, for POAG group – IOP medical compensation. Immunoenzymatic determination of 25(OH) vitamin D level in human plasma level was developed by using kits «IDS»(Germany).

Results:

Mean 25-OH D level in cataract patients was outside the normal range in all groups and was $12,1 \pm 5,6$ ng/ml in age cataract, $9,9 \pm 3,9$ ng/ml in POAG group and $9,8 \pm 5,1$ ng/ml in high myopia patients. The correlation between age and vitamin D level showed a negative relationship in all groups ($r = -0,51$, $P = 0,001$ in cataract group, $r = -0,37$, $P = 0,03$ in glaucoma group and $-0,25$, $P = 0,06$ in myopia). There was revealed low vitamin D level in all age groups in cataract patients with high myopia.

Conclusions:

The average level of 25(OH)D in all examined patients scheduled for cataract surgery, residents of Kherson region was significantly lower than the reference values and corresponds to the deficiency in the age cataracts (20-10 ng/ml) and a severe deficiency in the group of patients with high myopia and glaucoma (less than 10 ng/ml).

Miscellaneous

PP529

Fundus flavimaculatus without maculopathy. Six-month follow-up in a newly diagnosed patient

Presenting author: Cerghedeana-Florea Maria-Emilia, Romania

Purpose:

Fundus flavimaculatus is a genetic condition, an entity of Stargardt's disease, characterized by irregular-shaped, yellow lesions and a common cause of central vision loss. Although there is a specificity related to age, being a common juvenile dystrophy, it can be discovered in different decades of life, sometimes accidentally.

Setting:

Sibiu County Emergency Clinical Hospital, Ophthalmology Department, Sibiu, Romania

Methods:

This case report describes the clinical ocular symptoms and their evolution during six months of a patient whose clinical data including medical history, findings on physical examination and local examination were suggestive of fundus flavimaculatus. A set of investigations, such as fundoscopic examination, retinal photography, optical coherence tomography (OCT) and perimetry were used for diagnosis and follow-up.

Results:

On ophthalmologic examination best corrected visual acuity (BCVA) was 20/20 in both eyes (OU), normal intraocular pressure and normal anterior segment. The fundus examination and retinal photography: small subretinal white-yellow areas of the posterior pole except for the macular area. OCT: normal macular thickness in both examinations. Visual field (OU) shows the presence of central scotomas, which disappear during the follow-up period.

Conclusions:

The onset of symptoms in the fifth decade of life is unusual but possible. In some cases, it may have prognostic significance. Analyzing this case, evolution of ocular changes, late onset and slow progression, the disease seems to be in a latent state. The disease remains an incurable condition, but quality of life of these patients depends on macular involvement, allowing better visual performance in cases where it is not affected.

Miscellaneous

PP530

Refraction in candidates for laser vision correction – a comparison between subjective and objective by optical quality analysis system

Presenting author: André Ferreira, Portugal

Purpose:

To evaluate the inter-test agreement among two different refraction methods for myopic candidates to laser vision correction. The secondary objective was to assess potential factors influencing the difference between methods.

Setting:

Cross-sectional, unicenter, Refractive Surgery Unit of Ophthalmology Department of Centro Hospitalar Universitário do Porto, Oporto, Portugal

Methods:

Subjective refraction was performed by an experienced ophthalmologist using a standard trial frame and lenses at 12mm vortex distance. Objective refraction by optical quality analysis system (HD Analyzer[®]) was calculated by a sweep analyses of a double-pass image at different spherical corrections and corrected for a 12mm vortex distance. A two-way random effects intraclass correlation coefficient (ICC) with a 95% confident interval was performed to assess the reproducibility between methods. A linear mixed model was designed to assess the effect of the sphere, cylinder and pupillary diameter in the absolute difference of spherical equivalent between methods.

Results:

This study included 95 eyes of 57 patients (75% females) with a mean \pm SD age of 32.24 \pm 5.36 years. The mean \pm SD spherical equivalent was -3.00 \pm 1.32D for subjective refraction and -2.70 \pm 1.34D for objective refraction by HD analyzer. Subjective sphere and cylinder ranged from -7 to 0D and -3.5 to 0D, respectively. The intraclass correlation coefficient (95%CI) for spherical equivalent was 0.98 (0.95-0.99) corresponding to an excellent agreement between methods. After adjusting for the subjective cylinder and pupillary diameter, greater absolute values of sphere (β = 0.07, p <0.043) were associated with a greater difference between methods.

Conclusions:

A precise refraction is crucial for a successful refractive surgery as both over and under corrections may unmet patients' and surgeons' expectative. The spherical equivalent provided by HD Analyzer may be a very good proxy for the subjective refraction of experienced ophthalmologists and can be used as reference. Although statistically significant, the influence of sphere in the difference between methods is devoid of clinical interest. The cylinder and the pupillary diameter did not influence the difference between methods in this sample.

Miscellaneous

PP531

Evaluation of a model of synchronous teleophthalmology for patients with chronic corneal and ocular surface disease.

Presenting author: Monica Lecumberri, Spain

Purpose:

The health crisis caused by the coronavirus (COVID-19) pandemic has led to a decrease in hospital visits and promotion of teleophthalmology. The synchronous teleophthalmology modality through phone or video call is strengthening itself as a new healthcare tool. The aim of this study was to evaluate the usefulness of telephone visits done to patients with chronic corneal and ocular surface diseases.

Setting:

Hospital Moisses Broggi. Consorci Sanitari Integral.

Methods:

Prospective observational study. Telephone visits of patients with chronic corneal and ocular surface disease were evaluated. Telephone visits were defined as accurate or inaccurate depending on whether the phone call provided sufficient medical assistance. Patients with inaccurate virtual visits were scheduled for a face-to-face visit. After performing complete examination with slit-lamp it was analyzed the usefulness of the virtual visit to detect acute pathology. Estadistically significant associations were searched.

Results:

147 telephone visits were evaluated. 16 patients (10,9%) did not answer the phone call. 7 patients (4,8%) were referred to other subspecialties (retina or glaucoma). There remained 124 virtual visits: 74 were accurate (59,7%) and 50 (40,3%) were inaccurate. 27 Inaccurate virtual visits (60%) were able to identify acute pathology. It was scheduled subsequent visit in 109 patients. 15 patients (11,5%) were discharged. 66,7% of discharged patients belonged to the pterygium postoperative follow-up group. It was found significant difference between pathology and probability of being discharged.

Conclusions:

The usefulness of telephone visits in patients with chronic cornea and ocular surface disease is limited to screening and to postoperative follow-up of pathologies that generate few complications such as pterygium.

Miscellaneous

PP532

Retinal Optical Coherence Tomography Angiography Findings of Acute Anterior Uveitis

Presenting author: Gülay Yalçınkaya, Turkey

Purpose:

To evaluate the changes in retinal microvasculature in eyes with anterior uveitis (AU) using optical coherence tomography angiography (OCTA).

Setting:

University of Health Sciences Beyoglu Eye Training and Research Hospital, Istanbul, TURKEY

Methods:

Consecutive patients presenting with acute AU attack were enrolled in the study. Fellow healthy eyes were accepted as the control group. Four en face OCTA images were acquired from each scan with segmentation at the superficial capillary plexus (SCP), deep capillary plexus (DCP), outer retina (OR), and choriocapillaris (CC) levels, vessel densities (VD) were calculated for each level. Foveal avascular zone (FAZ) area of the SCP and DCP was measured from en face images that were obtained from the SCP and DCP based on automated layer segmentation. The parameters were compared between the two groups.

Results:

FAZ and VDs were analyzed from 34 healthy and 41 uveitic eyes. The deep FAZ was significantly lower in the eyes with AU during the attack than after recovery and the control group ($p=0.001$ and $p=0.003$, respectively). The VD in deep capillary plexus (DCP) in eyes with AU during the attack was significantly higher than the control group ($p=0.048$). The VD in the foveal sector of DCP in eyes with AU during the attack and after recovery was significantly higher than the control group ($p=0.001$ and $p=0.031$, respectively).

Conclusions:

Acute AU may affect macular microvasculature temporarily, especially in deep FAZ, VD in DCP; however, the VD in the foveal sector of DCP may remain higher than normals.

Miscellaneous

PP533

A rare case of a circumscribed choroidal haemangioma - a diagnostic challenge.

Presenting author: Liam Bourke, Ireland

Purpose:

To describe the case and present images of a 48-year-old gentleman diagnosed with a circumscribed choroidal haemangioma (CCH). CCH typically presents as a solitary, unilateral tumour in the posterior pole of the eye without any other ocular or systemic anomalies. Its true incidence is unknown, as most are only diagnosed if the patient becomes symptomatic or incidentally during routine examination. However, Jarrett et al found one CCH for every 15 cases of choroidal melanoma diagnosed. As CCH may mimic a malignancy and lead to unnecessary and potentially harmful treatment, it is critical to be aware of its diagnostic features.

Setting:

Ophthalmology department, Cork University Hospital (CUH), Wilton, Cork, Ireland/Ophthalmology department, Royal Victoria Eye and Ear Hospital (RVEEH), Adelaide Road, Dublin, Ireland.

Methods:

Our case describes that of a 48-year-old gentleman who presented to the casualty in CUH with a 6-month history of reduced vision in his left eye. He also reported nausea and vomiting and had a 40 pack-year smoking history. Vision was 6/6 UA in the right eye and 6/18 UA (no improvement with pinhole) in the left eye. Ophthalmoscopy revealed a raised and amelanotic choroidal lesion in the superotemporal quadrant of the left eye with associated sub-retinal fluid. Given this ocular finding and his systemic symptoms reported, he underwent extensive imaging and investigation.

Results:

Systemic investigation was unremarkable and after further ocular ancillary tests and investigation, the patient was diagnosed with CCH. He underwent treatment with photodynamic therapy (PDT) under an ocular oncologist in the RVEEH. Choroidal haemangiomas are benign vascular hamartomas of the choroid that present as two subtypes: circumscribed and diffuse. The circumscribed type manifests as an isolated unilateral tumour without systemic associations and is considered to be congenital in origin. It typically appears as a round, orange-red elevated mass posterior to the equator. Histologically, these tumours are non-proliferative lesions with no evidence of cellular proliferation in their vessel wall.

Conclusions:

It is previously reported that 5-10% of eyes enucleated for choroidal melanoma actually contained a CCH. Shields et al published a study where the diagnosis of CCH was accurately suspected before referral only in 29% of cases. Most commonly, referral diagnoses are an unspecified choroidal tumour, choroidal melanoma or choroidal metastasis. Serous chorioretinopathy is the most common non-tumour differential diagnosis, which may be due to the subtle clinical appearance of the CCH combined with the frequent presence of SRF. PDT is the treatment of choice for symptomatic haemangiomas with high rates of tumour regression, subretinal fluid resorption and minimal complications.

Miscellaneous

PP534

Different mechanisms and causal agents of eye trauma IN CHILDREN: About 105 cases

Presenting author: Ihssan HASNAOUI, Morocco

Purpose:

Childhood eye trauma is the most common eye emergency visit. The clinical manifestations vary depending on the site of the trauma, the mechanism, the intensity of the shock, the traumatic agent and the associated lesions. It is a diagnostic and therapeutic emergency because they expose to complications that can compromise visual function. The aim of our study is to identify the different causal agents and their mechanism in a given population of children in order to better engage society.

Setting:

This is a retrospective study collected at the Ophthalmology B department of the Specialties Hospital of Rabat between November 2018 to January 2020. All of our patients underwent a complete ophthalmologic examination with paraclinical examination (X-ray

Methods:

105 patients were treated in our department for unilateral eye trauma. The mean age at diagnosis was 6 years. The most common traumatic agent involved was stone (23%), wooden stick (15%), unknown cause (11%), knife (children, 10%), vegetable thorn and metallic film accounted for (8% of each)... Corneal injury (42%) followed by corneoscleral injury (17%), scleral wounds (5%), sclerolimbic injury (3%). Complications were dominated by traumatic cataracts (28%), hyphema (21%), Berlin edema (5%), foreign bodies (4% found on orbital CT), globe burst (3), lens dislocation (3), endophthalmitis (2%) and the rest (fracture of the large wing of the sphenoid and fracture of the orbital walls, retinal detachment retinal hemorrhage, ocular hypertension and abscess).

Results:

Open-globe eye trauma dominated with a male predominance in our study, which coincides with many published studies. Eye trauma is responsible, in the absence of early and appropriate care, for unilateral visual impairment most often up to permanent blindness. The most frequent complication is lens opacification causing problems both on the surgical plan than in terms of optical correction. Eye trauma is a major cause of unilateral amblyopia. The short- and long-term consequences of early childhood trauma are very difficult to predict and depend on a large number of variables: the nature, duration, intensity, number of times and frequency with which they occur, arise, age and pre-existing health condition.

Conclusions:

The majority of eye injuries have occurred during play while the child was handling sharp, pointed or other objects. Open-globe eye trauma is a real public health problem due to its frequency and severity. Management must be early and appropriate in order to avoid the occurrence of complications that could compromise visual function or even vital prognosis. The monitoring and treatment of secondary amblyopia is essential. The importance of surveillance and prevention must form the basis of any kind of awareness raising among parents, educators and children.

Miscellaneous

PP535

Astrocytic hamartomas of the retina in tuberous sclerosis of Bourneville : a case report

Presenting author: Karima Madbouhi, Morocco

Purpose:

Through a case of tuberous sclerosis of Bourneville with retinal localization, we discuss the different clinical and evolutionary aspects of this affection

Setting:

Service ophtalmologie A, Hôpital des spécialités, Rabat, Morocco

Methods:

A 20-year-old patient, followed in the dermatology department for tuberous sclerosis of Bourneville. At the ophthalmological examination, VA was at 20 /20 in ODG without optical correction. The ocular appendages and anterior segment were without any notable abnormalities. In the fundus, we found in the right eye a white-grayish translucent parapapillary nasal finely vascularized tumor formation, suggesting a type I astrocytic hamartoma, with two other small cottony interpapillary lesions. In the left eye, there was a whitish, partially calcified tumor lesion with a papillary diameter of the nasal para papillary seat.

Results:

The fluorescein angiography showed an autofluorescent appearance at early stages becoming hyper-fluorescent at late stages in both eyes with a peripheral lesion causing a window effect. General examination showed a diffuse angiofibromas on the face and trunk with achromatic spots on the back. The neurological, cardiovascular and abdominal examinations were normal. Chest x-ray, kidney ultrasound, echocardiography and CT scan of the brain did not show other localizations.

Conclusions:

Astrocytomas of the retina are rare tumors, often a part of the picture of tuberous sclerosis of Bourneville. However, skin and neurological lesions dominate the clinical picture of this phacomatosis. The ophthalmologist plays an important role in the confirmation of the diagnosis, he should not however miss an optic nerve glioma, which, although less frequent than in neurofibromatosis, can nevertheless strain the visual prognosis in this pathology. Like many genetic diseases, there is currently no specific treatment for uncomplicated astrocytic hamartomas.

Miscellaneous

PP536

Presumed Trematode-induced hypopyon anterior uveitis in a child from Tunisia, North Africa

Presenting author: NESRINE ABROUG, Tunisia

Purpose:

To describe a unique case of hypopyon anterior uveitis caused by a presumed water-borne trematode infection in a child.

Setting:

Department of Ophthalmology, Fattouma Bourguiba University Hospital, Faculty of Medicine, University of Monastir, Tunisia.

Methods:

Case report

Results:

A 4-year-old boy presented with redness of the LE. Visual acuity was 20/20 in the RE and 20/40 in the LE. Examination showed a mild conjunctival redness, 2+ AC cells, and a whitish 2mm pearl-like granuloma seen in the AC at the 6-o'clock position with hypopyon. Work-up revealed high numbers of eosinophils and no evidence of tuberculosis, syphilis, or sarcoidosis. Questioning of the parents revealed a history of exposure to the village pond water. The diagnosis of presumed Trematode-induced anterior uveitis was made and the patient was treated with topical steroids. The granuloma resolved and visual acuity improved to 20/20.

Conclusions:

Presumed trematode-induced uveitis should be considered in the differential diagnosis of hypopyon anterior uveitis in children.

Miscellaneous

PP537

The outcomes of probing in congenital nasolacrimal duct obstruction in large group of patients.

Presenting author: Dagna Siedlecka, Poland

Purpose:

To report outcomes of probing in congenital nasolacrimal duct obstruction (CNLDO) among children at different age groups in Department of General Ophthalmology and Pediatric Ophthalmology, Medical University of Lublin, Poland.

Setting:

Department of General Ophthalmology and Pediatric Ophthalmology, Medical University of Lublin, Poland

Methods:

An 8 - year retrospective case series included 1005 patients [486 females (48.4%) and 519 males (51.6%)] aged 6 to 118 months, who underwent nasolacrimal duct probing between January 2013 and March 2021. The procedure was performed in the operating theatre under general anesthesia. Probing was successful when epiphora resolved 1 month after surgery, at the follow-up visit.

Results:

The success rate of the initial probing was 74% for all children and it was the greatest in age group of 15 months. It was shown that it decreased with age. After failed initial probing another procedure was performed in 174 cases (17,3%). After 3 unsuccessful nasolacrimal duct probing there was a temporary metal probe used for 7 days. It had been conducted in 15 cases (1.4%) and was successful in 13 cases (86.9%).

Conclusions:

Probing is an effective and safe procedure. The success is related to age, not to gender. Primary probing in congenital nasolacrimal duct obstruction (CNLDO) has a high success rate before age of 24 months.

Miscellaneous

PP538

Anterior segment parameters measured by different swept-source optical tomography and a camera Scheimpflug

Presenting author: Neus Burguera-Giménez, Spain

Purpose:

To compare pupil diameter (PD), anterior chamber depth (ACD) and white to white (WTW) using a rotating camera Scheimpflug, an anterior swept-source OCT (SS-OCT) and an optical biometer that uses SS-OCT technology in normal and keratoconic eyes.

Setting:

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Methods:

A case-control study in which 115 eyes, mean age 32,73 ± 11,67 years, 55 healthy eyes (CG) and 60 keratonic eyes (KG) were enrolled. Uncorrected corrected distance logMAR visual acuity (UDVA), spherical equivalent (SE), anterior swept-source optical coherence tomography, an optical biometer and Scheimpflug camera imaging were used to evaluate both groups. Mean values were compared between both groups. A second comparison was done to analyze differences between the 3 devices. A correlation was carried out to evaluate the association between SE, PD, ACD and WTW in each group and to test the similarity among devices in all parameters analyzed.

Results:

ACD reveal significant differences between CG and KG ($p=0.016$, $p=0.02$, respectively). CG and KG have shown significant differences ($p<0.01$) in all parameters when a comparison between devices was done. There was a significant moderate correlation in PD ($0.553\leq r\leq 0.627$, $p<0.01$), a significant strong correlation in ACD ($0.942\leq r\leq 0.971$, $p<0.01$) and WTW ($r=0.749$, $p<0.01$) in CG within devices. In KG, similar significant correlations have been found for PD ($0.637\leq r\leq 0.727$, $p<0.01$), ACD ($0.952\leq r\leq 0.988$, $p<0.01$) and WTW ($r=0.835$, $p<0.01$). Moderate negative correlation was found between ACD and SE in all devices in both groups (ranging r from -0.337 to -0.409 , $p<0.01$).

Conclusions:

There seems to be correlation in all anterior segment parameters measured among the different devices in keratoconus and healthy eyes. There are negative correlations in both groups between SE and ACD.

Miscellaneous

PP539

Taking care of the ocular surface in the surgery of severe lid ptosis

Presenting author: Alexa Anisia-Iuliana, Romania

Purpose:

Presenting a series of cases with severe lid ptosis in the context of a weak levator function and negative Bell reflex, operated by aponeurosis resection.

Setting:

The cases were operated by the same surgeon in the oculoplastics department of the "Sf. Spiridon" Emergency Hospital, Iași in the time frame March, 2020 - August, 2020. 14 lids with grade III ptosis from 11 patients were operated using the levator aponeur

Methods:

In all cases the levator function was weak with an average of 5 mm, despite that frontal suspension was not performed as the first recommendation. Choosing the resection technique is the main particularity of the cases- Bell reflex absence and a significant ocular surface history - anterior segment surgery (penetrating keratoplasty or multiple procedures for glaucoma), severe dry eye disease. The surgical procedure was done under intravenous anesthesia, and the patient was awoken up for suture adjustments to ensure the best ptosis correction and symmetry. For 2 weeks postoperative patients received an ocular gel lubricant applications for evening, before bed.

Results:

In 2 cases of unilateral ptosis reintervention was needed for the adjustment of the aponeurosis sutures to ensure symmetry, a case that was operated bilaterally developed unilateral postoperative blepharospasm that disappeared spontaneously after 3 weeks. A month postoperative all cases had completely corrected ptosis, after an average 6-month follow-up a single case had a residual grade II ptosis. In the follow up period there was no record of palpebral incomplete occlusion, the ocular surface homeostasis as measured with the Schirmer and Break up time test and the degree of ocular surface coloring did not change because of the lid surgery.

Conclusions:

The levator aponeurosis resection technique in cases with severe ptosis with weak levator function and negative Bell reflex can be a good therapeutic option for selected cases with severe ocular surface disease. As opposed to the frontal muscle suspension technique, levator aponeurosis resection offers a good palpebral closure which contributes greatly in maintaining ocular surface homeostasis. Taking into account these aspects the addressability of patients in regard to the ocular surface complications was significantly reduced which contributed to an easier follow-up for these patients during the SARS COV 2 pandemic context.

Miscellaneous

PP540

Fish-Eye Disease: ocular characteristics in anterior-segment optical coherence tomography of a patient with lecithin-cholesterol acyltransferase deficiency

Presenting author: Ismael Bakkali El Bakkali, Spain

Purpose:

We describe a case of Fish-Eye Disease (FED) in which the clinical features and visual function were investigated using anterior-segment optical coherence tomography (AS-OCT).

Setting:

Ophthalmology department of a tertiary level University Hospital. Zaragoza. Spain.

Methods:

A 38-year-old Spanish man with a known history of dyslipidemia came to our Hospital referring mild blurred vision and whitening of both eyes. Visual acuity was 1.00 (decimal). Slit-lamp examination showed bilateral, peripheral yellowish-white corneal opacities, causing corneal clouding. An AS-OCT was then performed, showing homogeneously hyper-reflective corneal stroma. On systemic examination, the patient had low plasma high-density lipoprotein cholesterol levels.

Results:

Both slit-lamp examination and AS-OCT imaging revealed a corneal opacification compatible with FED, a clinical feature secondary to a lecithin-cholesterol acyltransferase (LCAT) deficiency. The patient was sent to genetic counseling to study the mutation, which was later found to be positive for LCAT gene.

Conclusions:

Although it is not a common genetic disorder, FED should be included in the differential diagnosis of corneal clouding. The findings from this case suggest that a complete eye examination, both with slit-lamp and AS-OCT, can be useful for an early FED diagnosis despite good visual acuity.

Miscellaneous

PP541

Rare neuro-ophthalmological presentation of Behçet disease : unilateral internal jugular thrombosis

Presenting author: Imad MESSAFI, Morocco

Purpose:

Behçet disease (BD) is a rare autoimmune disease with unknown aetiology. It is mostly found in the ancient "silk route" (from the Mediterranean region to far east). BD is a vasculitis that can involves all veins, arteries and vessels of all sizes. Clinical features are dominated by oral , genital aphthae and uveitis. Central nervous system manifestations include parenchymal (80%) and non - parenchymal involvement (20%). Second ones can include cerebral sinus thrombophlebitis. The treatment is based on anti-inflammatory , immunosuppressive and anticoagulant agents.

Setting:

Ophthalmology department, Mohammed VI university hospital, Oujda, Morocco

Methods:

Here we report a rare case of unilateral jugular thrombosis revealing a BD in a young Moroccan male

Results:

A 40 years-old male , was admitted in ophthalmology emergency department for acute binocular diplopia and headache. Ophthalmological examination: visual acuity of 10/10 in both eyes , mild bilateral esotropia with horizontal diplopia worsening in abduction. Anterior segment was with no abnormalities , we found turgescient bilateral papilledema with peripapillary hemorrhages .Medical history and general exam revealed cutaneous signs: recurrent bipolar aphthosis and pseudofolliculitis . CT-scan was performed emergently: presence of a unilateral jugular spontaneous thrombosis. MRI confirmed thrombosis and excluded parenchymal involvement, rest of screening was normal. A spectacular improvement was obtained after anticoagulation and immunosuppressive therapy.

Conclusions:

Although main ophthalmological presentation of BD includes uveitis, it is crucial for ophthalmologists to think about indirect mechanisms of ocular involvement that can hide a vital emergency. Our case illustrates an unusual form of vascular BD, revealed by atypical thrombosis localization (internal jugular vein) and essentially characterized by ophthalmological signs.

Miscellaneous

PP542

Comparative analysis of the drugs for substitution therapy of the dry eye syndrome in Ukraine and Great Britain

Presenting author: Serhii Kryvoviaz, Ukraine

Purpose:

Managing patients with the dry eye syndrome is complex and involves the use of both conservative and surgical techniques. The treatment is aimed at reducing the deficiency of the lacrimal fluid and stabilizing the lacrimal film. The dry eye syndrome treatment depending on the etiological factors and severity of the disease usually begins with over-the-counter tear substitutes in the early stages. Therefore, the purpose of the research is to analyze the composition and medicinal forms of drugs for substitution therapy of dry eye syndrome that are available on the pharmaceutical market of Ukraine and Great Britain.

Setting:

The compositions of the drugs of the S01XA20 group – “Artificial tear fluid substitutes and other neutral drugs” according to the State Register of Medicines of Ukraine (2019) as well as of the ocular lubricants according to the British National Formulary

Methods:

The analysis of information was carried out by marketing, statistical, structural and graphic methods. First the information array of drugs for treating dry eye syndrome was formed by the analysis of official sources data. The segmentation according to the Anatomical-therapeutic-chemical classification was carried out during the structural analysis of the assortment of drugs. Next, a structural analysis of the assortment of drugs by INN was carried out. The segmentation of drugs assortment by composition and type of medicinal forms has also been performed.

Results:

There are 7 compositions of drugs active ingredients of the S01X A20 group – “Artificial tear fluid substitutes and other neutral drugs” for local substitutive therapy for dry eye syndrome in Ukraine. At the same time the group “Ocular lubricants” includes 15 compositions in Great Britain. An analysis of the drugs forms for substitution therapy showed that in Ukraine they are presented in two forms: eye drops and eye gels. Assortment analysis of ocular lubricants that are registered in Great Britain showed also the presence of eye ointments.

Conclusions:

The mechanism of action of drugs for substitution therapy of the dry eye syndrome in both countries is provided by the presence of active ingredients such as sodium hyaluronate, carbomer, hypromellose, carmellose, polyvinyl alcohol. Polyquad and povidone are used only in Ukraine. There are also acetylcysteine, hydroxyethylcellulose, sodium chloride, soybean oil, sodium hyaluronate with trehalose, hydroxypropyl guar with polyethylene glycol and propylene glycol, hypromellose with dextran 70, different combinations of paraffin that are registered in the composition of ocular lubricants in Great Britain that are not required in artificial tear fluid substitutes and other neutral drugs in Ukraine.

Miscellaneous

PP543

Treatment of orbital lymphangioma by the intralesional bleomycin injections

Presenting author: Jihane Ait Elhaj, Morocco

Purpose:

Orbital lymphangiomas are rare, benign, congenital entities. Their orbital localization makes them difficult to manage given their infiltrative nature which makes surgical resection complex and often incomplete. Hence the advantage of alternative therapies such as sclerotherapy. The purpose of this study is to describe the efficiency of intralesional bleomycin injections in the treatment and management of orbital lymphangiomas.

Setting:

20th August Hospital, Ibn Rochd University Hospital Casablanca, Hassan II University; Morocco

Methods:

We report the case of a 31-year-old young man, with a history of a maxillary cystic lymphangioma since childhood, who presented progressive vision loss and exophthalmos of the right eye, revealing a compressive intra-conical orbital cystic lymphangioma. Ultrasound-guided intra-cystic injections were administered using a reconstituted bleomycin solution of 3 ml (0.5 UI /kg ; with a maximum cumulative dose of 15 UI/ml) combined with 2ml of lidocaine 2%. Injections were repeated after 4 to 6 weeks. The indication to pursue injections was based on clinical and imaging criteria.

Results:

The patient initially presented an intra-conical compressive tumour of 18x17 mm, resulting in a grade II exophthalmos. After the first injection, the improvement was remarkable with a resolution of pain and tumour volume reduction, making eye occlusion possible. After the third injection, the tumour's volume diminished to 16x12 mm. Apart from palpebral ecchymosis and conjunctival hyperhemia, we didn't observe any side effects of the treatment.

Conclusions:

Given the accessibility of bleomycin and the simplicity of the procedure, the absence of any severe side effects, and the excellent response observed in our patient and reported in the literature, this procedure should be considered in the management of orbital lymphangioma, ideally during childhood before the compression impairs vision.

Miscellaneous

PP544

Anterior and posterior scleritis complicating bisphosphonate intake

Presenting author: Sourour Zina, Tunisia

Purpose:

To report a case of anterior and posterior scleritis occurring after bisphosphonate intake.

Setting:

Department of Ophthalmology, Fattouma Bouguiba University Hospital, Monastir, Tunisia.

Methods:

A case report about a 59-year-old female presented with severe pain and redness in her left eye (LE) 3 days after her first alendronate monosodium (FOSALEN) intake for osteoporosis.

Results:

Her best-corrected visual Acuity was 20/20 in both eyes. Slit-lamp examination of the LE revealed conjunctival hyperemia and chemosis with negative Neosynephrine test. The right eye was normal. Fundus fluorescein angiography was normal. Ocular ultrasonography showed a slight sclerochoroidal thickening with moderate echogenicity. SS-OCT revealed choroidal thickening. The diagnosis of anterior and posterior scleritis was made. Etiologic work-up has been performed, showing negative results. Clinical presentation and timing of symptoms with regard to the alendronate monosodium intake were highly suggestive of bisphosphonate-induced scleritis. Clinical symptoms resolved after indomethacin therapy and discontinuation of alendronate without subsequent recurrence of scleritis.

Conclusions:

Bisphosphonates have become a commonly used class of medications to treat osteoporosis and other bone diseases. Ocular inflammation including scleritis could be a rare but serious potential side effect of bisphosphonates. Physicians prescribing these drugs should be aware of this side effect, which is potentially devastating, if not recognized and treated appropriately.

Miscellaneous

PP545

Low-Tech Intraocular Ophthalmic Microsurgery Simulation (LTIOMS): A Low-cost Model for Home Use

Presenting author: Vidushi Golash, United Kingdom

Purpose:

In this talk we propose a smartphone-based, low-cost, low-tech model with corresponding exercises for intraocular simulation that can be used at home for surgical simulation. This model provides a low-cost, portable and reproducible method of simulation, and can serve as an adjunct to patient-facing surgical training, especially in the current pandemic where the access to simulation facilities is very difficult.

Setting:

Can be created and used in any setting, particularly amenable for use at home.

Methods:

In place of a microscope, we used a smartphone (iPhone X with iOS 13.5.1, Apple, USA) balanced on a stand of books (height 10.5cm) such that the smartphone camera was overhanging the books and looking down at a worksurface. The smartphone camera was used in Video mode with x2 zoom and phone torch illumination as required dependent on room lighting. Four important skills of performing the corneal incisions, capsulorhexis, improving the manual dexterity and suturing were identified. For each skill a set of equipment needed, set-up and the exercise were developed using validated techniques, discussed and agreed amongst all authors.

Results:

This model is part of an educational exercise for home-based, low-tech, low-cost surgical simulation. No formal study has yet been done, therefore there are no formal results to share as part of this submission.

Conclusions:

We believe by simplifying simulation training methods and enabling trainees to undertake it in the comforts of their own home or at the workplace office space, our intraocular microsurgery simulation model provides an easy, feasible, realistic and practical option. Assuming most trainees have access to a smartphone that they already own, and basic disposable surgical instruments as described in our technique, our models does not require any additional expense thereby minimising cost and resource barriers. Additionally, the smartphone use will enable the practice to be recorded and discussed with a trainer for feedback.

Miscellaneous

PP547

Therapeutic Arsenal for managing Advanced Fusarium keratitis : Place of Amniotic Membrane Graft and Therapeutic Keratoplasty

Presenting author: Yassine Malek, Morocco

Purpose:

Keratomycosis or Fungal keratitis is an infective disease of the cornea and represents a major cause of monocular blindness, especially in developing countries. Late diagnosis or inadequate medical treatment may lead to severe complications ; and may require more or less invasive surgical procedures such as amniotic membrane graft (AMG), intrastromal voriconazole injection (IVI), or therapeutic keratoplasty (TK). The purpose of this free paper is to highlight the continuum of procedures available to treat resistant keratomycosis.

Setting:

This case has been reported in Mohammed V Military Training Hospital Rabat, Morocco.

Methods:

A 35-year-old male was referred from emergencies to the ophthalmology department with a history of sudden redness, pain, tearing, and decreased vision of the right eye. Ophthalmic examination revealed a best-corrected VA of hand motion RE, and 20/20 LE. The RE showed intense diffuse conjunctival hyperemia and a central creamy corneal abscess, with positive fluorescein staining and grayish stromal infiltrate with irregular borders and inferior satellite lesions. The anterior chamber was transparent and the fundus was unassessable. B-scan Ultrasonography was unremarkable. Superficial corneal scrapping was made and corneal specimens were immediately transported to the laboratory for microbiological detection and isolation.

Results:

Empirical fortified antibiotics were begun. Repeated corneal scrapping permitted the isolation of fungal hyphae, then fortified Voriconazole was started q1h. Evolution was pejorative and decision to implant a double-layered AMG was made. After its resorption, a dramatic deterioration occurred. After having depleted all of the therapeutic arsenal, including adjunction of fortified Amphotericin B (0,15%) , we considered performing at day 40 a penetrating TK. No sign of infection recurrence was noted initially, however a graft failure occurred. Curative treatment of the rejection was administered permitting the reversal of the rejection process without reactivation of the fungal infection.

Conclusions:

We managed a case of recalcitrant fusarium keratitis for which all conventional medical treatment and invasive surgical techniques were used to stop the infection and recover vision. We emphasize the need for strived management in such difficult cases so as not to compromise the patient's vision recovery chances.

Miscellaneous

PP548

Ocular rosacea complicated by bilateral ectropion: a case report

Presenting author: Selma Chiguer, Morocco

Purpose:

We report the case of a patient with bilateral ectropion, secondary to ocular rosacea. To our knowledge, this ocular complication is little described in the literature. Then the optimal treatment of rosacea and all other inflammatory disorders is mandatory to prevent the cicatricial ectropion.

Setting:

Adult Ophthalmology Department, 20 August 1953 Hospital / IbnRochd University Hospital, Faculty of Medicine and Pharmacy, Hassan II University, Casablanca, Morocco.

Methods:

A 68 years old woman was referred to our structure for the management of bilateral ectropion. She relates this manifestation 18 years ago which progressed gradually. Previously, the patient had been followed for 30 years for rosacea with multiple periods of exacerbation per year, with poor compliance with treatment.

Results:

The patient's best-corrected visual acuity was 3/10 OD, 4/10 OG. The external examination revealed cutaneous rosacea with rhinophyma and cicatricial ectropion in both eyes. Biomicroscopy revealed an augmented lacrimal river, eversion of lacrimal punctum which is fibrotic and a crust on the free margin of the eyelid. We found conjunctival fibrosis, punctate epithelial keratitis and alteration of the break-up time. The rest of the ophthalmological exam revealed a subcapsular cataract. We proposed an ocular surface treatment to our patient. Also, stabilization of her rosacea by dermatologist, then we proposed the patient for a surgical treatment of her ectropion.

Conclusions:

Cicatricial ectropion is one of the common types of ectropion that has been described. Inflammatory disorders such as rosacea could be one of the causes of this cicatricial eyelid malposition. Optimal treatment of rosacea and all other inflammatory disorders is mandatory to prevent the cicatricial ectropion.

Miscellaneous

PP549

Hypertensive retinopathy during preeclampsia: about a case report.

Presenting author: TABCHI manal, Morocco

Purpose:

Pre-eclampsia is a general disease that can affect all organs, including the eyes. Hypertensive retinopathy is a complication of preeclampsia, which can lead to blindness.

Setting:

Ophthalmology unit A, hôpital des spécialités, Mohammed V university in Rabat.

Methods:

We report the case of a 30-year-old woman, with severe preeclampsia, who consulted for bilateral, rapidly progressive acuity decline. We performed a complete ophthalmologic examination of this patient. A fluorescein angiography and a macular oct were requested.

Results:

The clinical examination revealed a reduced visual acuity with finger movement in both eyes. The fundus showed papilledema, multiple flare hemorrhages, cottony nodules, dry exudates, elshnig spots, and arteriovenous crossing. Fluorescein angiography showed the extent of choroidal ischemia. Macular octopus revealed bilateral serous retinal detachment. The patient was referred to the cardiology department for control of her hypertension.

Conclusions:

hypertensive retinopathy in pre-eclampsia is a serious complication that can be life-threatening for the patient. its treatment is based on the control of hypertension. hence the interest of ophthalmologic surveillance in patients with pre-eclampsia.

Miscellaneous

PP550

Juvenile cataract in a Neurofibromatosis type 1 patient : a case report

Presenting author: latissam El Belhadji, Morocco

Purpose:

To describe a case of juvenile bilateral cataract in a young patient with Neurofibromatosis type 1

Setting:

20th August Hospital, Ibn Rochd University Hospital Casablanca, Morocco

Methods:

We report the case of a 13 years-old boy who presented to the ophthalmology clinic for a standard eye exam. He had a history of type 1 neurofibromatosis diagnosed 3 years prior to the consult, dysphonia and pathological fractures. Upon examination, his visual acuity was 20/20, and suffered from allergic conjunctivitis, as well as a posterior blepharitis bilaterally. There were multiple Lisch nodules on the iris. He also presented a bilateral posterior polar cataract that didn't impair vision. There were fine vitreous filaments and the funduscopy was unremarkable as there wasn't any visible epimacular membrane.

Results:

The patient was prescribed antihistaminic drops, artificial tears and treatment for his blepharitis. Cataract surgery wasn't indicated as the vision wasn't impaired, and a yearly surveillance was ordered.

Conclusions:

This case is noteworthy as it illustrates a particular type of juvenile cataracts that can help establish the diagnosis of neurofibromatosis, along with Leisch iris nodules. Symptom onset at a young age is clearly a risk factor for marked disease progression. These patients should be carefully followed because survival rates have increased, and vision becomes increasingly important as the disease progresses.

Miscellaneous

PP551

Exophthalmos revealing a rare location of speno-orbital meningioma : A case report

Presenting author: Sara el hachimi, Morocco

Purpose:

Exophthalmos is a protrusion of the eyeball in front of the orbital bony frame. It is classically differentiated from exorbitism, which is the protrusion of the entire orbital structures forward. In practice, the etiologies of exophthalmos and exorbitis overlap. Exophthalmos usually results from an increase in orbital contents during inflammation, tumor, and more rarely, a lack of space in small orbits that can be seen in some congenital diseases. Intraosseous meningioma is a variety of ectopic meningiomas in which meningotheelial cells invade the bone wall and cause hyperostosis, frequently occurring in the speno-orbital region.

Setting:

Ophthalmology department of the UHC IBN ROCHD of CASABLANCA, Morocco.

Methods:

A 39 year old woman presented with a left unilateral exophthalmos that had been gradually evolving for one year without any notion of cranial trauma.

Results:

The examination found an axial, painless, non reducible and non-pulsatile exophthalmos as well as a limitation of the ocular motility in all the directions of gaze. The visual acuity was 7/10 in the concerned eye while the fundus examination was normal. The examination of the right eye was also normal. The patient did not present any neurological deficit. The cranio-orbital MRI showed a left fronto-temporal extra-axial process with a large meningeal implantation base in relation with a left speno-orbital meningioma. The patient underwent surgical excision with dural and parietal reconstruction in neurosurgery department

Conclusions:

Temporo-speno-orbital meningiomas are rare slow-growing tumors, and include mainly ophthalmologic symptoms. Deterioration of visual function is a poor prognostic factor. It is therefore important to inform the patient that surgery does not always guarantee visual recovery.



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PP552

Medical Education for China's Ophthalmologists During a Pandemic: An AGVC Model

Presenting author: Chong Shen, China

Purpose:

Aier Global Vision Care Management Co. (AGVC) is an Ophthalmic medical resource sharing platform seeking to deliver world class medical education to Ophthalmologists in China by leveraging its global network of Specialists, in an attempt to meet increasing demands for specialist eye care services within the country. The initial model of physically inviting world-renown experts to China for interactive medical education sessions with local Ophthalmologists was severely derailed by the COVID-19 pandemic. We describe how AGVC was able to adapt to the rapidly evolving situation in order to minimise the impact of the ongoing pandemic on our Medical Education program.

Setting:

All hospitals within Aier Eye Hospitals Group's network spanning China, United States, Europe and Southeast Asia in addition to partner hospitals from Brazil and India.

Methods:

AGVC established a secure online platform within 1 month, which enabled invited global experts to deliver distance learning courses on a vast range of topics with a range of complexities, catering to a wide spectrum of Chinese Ophthalmologists, each at differing stages of their respective careers and with their own specific learning needs. Live translation from English and Spanish to Mandarin was provided by young residents in training, providing them not just with an opportunity to improve their clinical knowledge and linguistic abilities, but also the chance to work with eminent Ophthalmologists and thus laying the foundation for future collaborations.

Results:

A total of 35 online training sessions were carried out in 2020, each spanning 90 minutes. The sessions covered all Ophthalmology sub-specialties, in addition to optometry and nursing related subjects. Emphasis was also placed on hospital management and business administration topics. The didactic lectures were usually followed up by 30 minutes of interactive Q&A sessions, which generated much debate and discussion between panel members and the audience. 11 international experts on their respective fields delivered the talks on the AGVC platform with an estimated audience of over 16,000 benefiting from the online courses. Feedback was immediate and overwhelmingly positive.

Conclusions:

The AGVC platform has proved invaluable in minimizing the impact of the pandemic on medical education within China. We believe that teaching and training the next generation of Chinese Ophthalmologists is crucial in meeting the projected rise in demand for Ophthalmology related services in the decades to come. The AGVC platform supports these doctors in their development into the future leaders and experts of the ophthalmic industry. AGVC will build on this momentum by establishing an official WeChat account, which provides a shared learning environment for Chinese Ophthalmologists and their global counterparts for resource uploading and case discussions.

Miscellaneous

PP553

Assessment of value of adding low dose of intermediate acting nondepolarizing muscle relaxant to local anesthesia and hyaluronidase mixture pericorneal and peribulbar anesthesia for high myopes in ophthalmic surgery

Presenting author: Alaa atia, Egypt

Purpose:

To assess the value of adding low dose of intermediate acting nondepolarizing muscle relaxant to local anesthesia and hyaluronidase mixture pericorneal and peribulbar anaesthesia for high myopes in ophthalmic surgery

Setting:

Memorial institute of ophthalmic researches- specialized center of ophthalmic surgeries

Methods:

Eighty two patients with ASA I-III planned for elective ophthalmic surgery with high myopia were enrolled in a double-blind comparative study. Patient were randomized to two groups . group A(n=42) where patient received lidocaine. Bupivacaine local anaesthesia , hyaluronidase and atracurium (intermediate acting non depolarizing muscle relaxants) pericorneal and peribulbar. Group B(n=38) where patient received lidocaine, Bupivacaine local anesthesia and hyaluronidase pericorneal and peribulbar.

Results:

As regard demographic data, hemodynamic changes , and oxygen saturation no statistically significant difference between both groups. As regard criteria, onset of akinesia is shorter in group A than B . as regard duration of akinesia no significant difference between the two groups, as regard analgesia no significant difference between the two groups . it was noticed that adding atracurium to local anesthesia solutions did not significantly increase the risk of complications.

Conclusions:

Adding low dose of intermediate acting nondepolarizing muscle relaxant to local anesthesia and hyaluronidase mixture pericorneal and peribulbar anaesthesia for high myopes prior to ophthalmic surgery is effective and safe

Miscellaneous

PP554

Management of an Ophthalmology Department During COVID-19 Pandemic in Milan, Italy

Presenting author: Fabrizio Camesasca, Italy

Purpose:

Spreading from China, COVID-19 pandemic reached Italy, the first massively involved western nation. At the beginning of March, 2020 in Northern Italy a complete lockdown of activities was imposed. Access to all healthcare providers, was halted for patients with elective problems. We present the management experience of the Humanitas Clinical and Research Center Ophthalmology Department in Rozzano, Milan, Italy, during the lockdown.

Setting:

Humanitas Clinical and Research Center Ophthalmology Department, Rozzano, Milan, Italy,

Methods:

Containment measures were taken to reduce viral transmission and identify infected patients. All planned visits were canceled but for those not deferrable. Social distancing was introduced reducing number of visits per hour. Minor surgery for progressive pathologies was continued. As the lockdown prolonged, we reorganized patient care. All canceled cases were evaluated by electronic medical records analysis and telephonic triage, to identify, recall and visit patients at risk of vision loss.

Results:

From March 9, to April 30, 2020 we performed a total of 930 visits and 612 exams. Some visits (n=698) and exams (n=160) were deemed as necessary for continuity of care and performed as planned. Among the remaining 1283 cancelled appointments, after evaluation 144 visits and 32 instrumental exams were classified as urgent and rapidly rescheduled. Performed surgical activities were limited to corneal collagen cross linking (n= 39) and intravitreal injections (n= 91), compared to 34 and 94, respectively, in the same period of 2019.

Conclusions:

In-office activities deemed not deferrable were performed safely. The recall service was highly appreciated by all patients. No patient or staff member reported symptoms of COVID-19.

Miscellaneous

PP555

Comparison of modern methods for intraocular lens power calculation in eyes with a history of laser vision correction

Presenting author: Pedro Nuno Pereira, Portugal

Purpose:

To evaluate the accuracy of modern and established formulas for intraocular lens (IOL) power calculations based on the most recent and different derivation methods (empirical linear regression, ray tracing, emmetropization theory, and intraoperative wavefront aberrometry) in eyes that have previously undergone myopic or hyperopic laser in situ keratomileusis vision correction.

Setting:

Retrospective case series.

Methods:

A total of 44 eyes of 31 patients were included. The postoperative spherical equivalent for the same implanted IOL was estimated using the following formulas: Barrett True-K, Haigis-L, Shammas, PhacoOptics®, SRK/T Double K, Holladay 1 Double K, Emmetropia Verifying Optical (EVO) v2.0, Masket, Modified Masket, SRK/T, Intraoperative Wavefront Aberrometry and the average American Society of Cataract and Refractive Surgery (ASCRS) calculator. Barrett True-K formula was performed considering the posterior cornea power (PCP) that was measured or predicted. Outcomes included the median absolute prediction error (MedAE) and proportion of eyes within 0.25, 0.50, 0.75, and 1.00 diopters (D) of this prediction.

Results:

In eyes that had undergone prior myopic laser treatment with no historical data (n=35), Barrett True-K No History with predicted PCP yielded the lowest MedAE (0.27 D). This was followed by the average ASCRS (0.35 D), EVO No History (0.37 D) and Haigis-L (0.38 D) (p=0.42). IWA yielded a MedAE of 0.41D. In eyes with available historical data (n=24), Barrett True-K with measured PCP yielded the lowest MedAE (0.24 D). This was followed by EVO (0.28 D), average ASCRS (0.28 D) and Modified Masket (0.31 D) (p=0.01). In the hyperopic group, Shammas formula exhibited the best performance (0.13 D) (p=0.08).

Conclusions:

This study demonstrated that, with historical data, IOL power calculation formulas yield high accuracy in myopic eyes with a history of refractive surgery. In particular, the Barrett-True-K formula performed best.

Miscellaneous

PP556

Comparison of Amino acid Levels in Aqueous Humor and Plasma in Diabetic and Non-diabetic Cataract Patients

Presenting author: Erman Bozali, Turkey

Purpose:

To evaluate and compare amino acid levels in aqueous humor and venous blood samples obtained simultaneously in diabetic and non-diabetic patients with cataract.

Setting:

Sivas Cumhuriyet University School of Medicine, Department of Ophthalmology, Sivas, Turkey

Methods:

Patients with complaint of blurred vision and diagnosed with cataract were enrolled in this prospective study. Group 1 consisted of 35 cataract patients with diabetes mellitus (DM) and Group 2 consisted of 35 cataract patients without DM. Levels of 24 amino acids (alanine, arginine, asparagine, aspartate, phenylalanine, phosphoethanolamine, glycine, glutamine, hydroxylysine, histidine, homocystine, isoleucine, lysine, leucine, methionine, ornithine, proline, serine, cystine, taurine, threonine, tyrosine, tryptophan, and valine) were measured using the Liquid Chromatography with Tandem Mass Spectrometry (LC-MS / MS) method in all samples including aqueous humor and plasma.

Results:

Both groups were similar regarding age and gender ($p > 0.05$, for all). Aqueous humor lysine, leucine, isoleucine, valine levels were higher in diabetic cataract patients compared to the non-diabetic group ($p < 0.05$). However, no statistically significant difference was found in terms of remaining 19 amino acid levels ($p > 0.05$). When plasma amino acid levels of diabetic and non-diabetic groups were compared, the difference between groups was not statistically significant ($p > 0.05$, for all amino acids).

Conclusions:

The alterations in amino acid levels of aqueous humor may be associated with the pathogenesis and early onset of cataract in diabetic patients independent of plasma levels.

Miscellaneous

PP557

Evaluation of the impact of COVID-19 infection on macular capillary perfusion using optical coherence tomography angiography

Presenting author: Mine Esen Baris, Turkey

Purpose:

To evaluate the impact of previous COVID-19 infection with mild to moderate symptoms on retinal microcirculation using the optical coherence tomography angiography.

Setting:

Hyper-coagulability and thromboembolic complications related to COVID-19 infection have been frequently reported especially in patients with severe disease. Since retinal capillaries are common sites for thromboembolic complications in systemic diseases w

Methods:

A total of 58 eyes of 30 patients with previous mild to moderately symptomatic COVID-19 infection confirmed with positive PCR test (Group 1) and 58 eyes of 29 controls without history of the infection (Group 2) underwent detailed eye examination including Spectral-Domain optical coherence tomography (OCT) and OCT angiography (OCTA) scanning. OCT images were used to measure subfoveal choroidal thickness (SFCT) and OCTA images (6x6mm) were assessed in terms of central retinal thickness (CRT), vessel densities (VD) in superficial capillary plexus (SCP) and deep capillary plexus (DCP) and foveal avascular zone (FAZ).

Results:

The mean ages of Group 1(20 female, 10 male) and Group 2(14 female, 15 male) were $41,93\pm 12,28$ (range, 24-70) and $41,94\pm 5$ (range, 31-53) years, respectively ($p=0.49$). The mean time period after the first positive PCR test was $4,86\pm 2,74$ (range, 1-9) months. SFCT was $377.66\pm 85.51\mu$ in Group 1 and $357.65\pm 80.18\mu$ in Group 2($p=0.3$), while CRT was $249.58\pm 21.3\mu$ in Group1 and $250.53\pm 14.6\mu$ Group 2($p=0.4$). There was no statistically significant difference between groups in terms of VD in SCP and DCP (Whole image; $51.0\pm 3.7\%$ vs. $52.85\pm 9.9\%$ and $55.1\pm 7.0\%$ vs. $58.7\pm 4.3\%$ respectively; $p=0.05$). FAZ areas were 0.28 ± 0.12 mm² in Group 1 and 0.24 ± 0.06 mm² in Group 2($p=0.05$).

Conclusions:

Although vessel densities were slightly lower in SCP and DCP in COVID-19 group, the difference was not statistically significant.

Miscellaneous

PP558

Influence of cosmetic procedures in the periorbital zone on the tear-producing system

Presenting author: Ksenia Chinenova, Russian Federation

Purpose:

1. To perform a comprehensive evaluation of clinical and functional indicators characterizing the state of the ocular surface and tear-producing system when using cosmetic procedures in the periorbital region; 2. to determine the clinical features of the manifestation of dry eye disease (DED) and dysfunction of the meibomian glands in patients with a medical history of cosmetic procedures in the periorbital zone; 3. to study the predictive risk factors for the development of dry eye syndrome and dysfunction of the meibomian glands during cosmetic procedures in the periorbital zone.

Setting:

LLC “Dr. Kurenkov Clinic”, Moscow, Russia

Methods:

The study was carried out on patients with an evaporative form of DED according to the 2017 DEWS classification. All patients under study were divided into two categories - those who didn't undergo cosmetic procedures (50 patients, 100 eyes) and those who underwent such cosmetic procedures as eyelid tattooing, eyelash extension, botulinum toxin injections for cosmetic purposes (56 patients, 112 eyes). To evaluate the state of the tear-producing system, tests were performed in order to determine the morphological and functional state of meibomian glands and the level of tear production (meibography, biometrics of meibomian glands, Schirmer's test, tear breakup time).

Results:

The data suggests that cosmetic procedures affect the clinical and functional state of the ocular surface and meibomian glands. For the second category of patients, who underwent cosmetic procedures, a decrease in the indicators of tear production tests was noted and the frequency of detection of the DED was 36% higher compared to patients in the first category. The greatest correlation between parameters, standardized during the study, and cosmetic procedures was found for the introduction of botulinum toxin suggesting that this cosmetic procedure has the most significant negative effect on the condition of the ocular surface and tear-producing system.

Conclusions:

The performed study demonstrates that various types of cosmetic procedures in the periorbital zone, which have gained in popularity in recent years, can cause the appearance of the iatrogenic dry eye syndrome. Considering that the modification of the tear production, in addition to causing discomfort, may lead as well to serious complications, including a prolonged recovery after eye surgery, it is necessary to pay more attention to the medical history and identification of additional risk factors for the development of DED. This would enable subsequent control and could prevent various complications emerging.

Miscellaneous

PP559

Kitten Danger: Conjunctival Lymphoma Masquerade

Presenting author: Miguel Leitão, Portugal

Purpose:

To describe a case of an 17 year-old girl with an unusual presentation of Parinaud Oculo-Glandular Syndrome from cat-scratch disease, mimicking conjunctival lymphoma and to present a literature review on Parinaud Oculo-Glandular Syndrome.

Setting:

Case-report study from the Emergency Department of Hospital Universitário Lisboa Norte and Instituto de Oftalmologia Dr. Gama Pinto.

Methods:

17 year-old girl presents in the ER with serous discharge, itching, red right eye and swollen lymph nodes on the right side of her neck for 3 weeks. She reported no improvement with lubricant and antihistamine. Her best-corrected visual acuity (BCVA) was 20/20 bilaterally, without abnormalities of ocular motility, diplopia or associated pain. There were multiple palpable, painful, right pre-auricular, submandibular and cervical lymph nodes, without hepatosplenomegaly. On slit-lamp examination, there was moderate papilar reaction on the tarsal conjunctiva and edematous, salmon-pink coloured semilunar fold on the right eye with otherwise normal bulbar conjunctiva. There were no fundus abnormalities.

Results:

She reported night sweats for 2 weeks and rescuing a kitten two months before her complaints. Blood workup revealed: $12.20 \times 10^9/L$ Leukocytes; C-reactive Protein (CRP) 2,38 mg/dL; Erythrocyte Sedimentation Rate (ESR) 59 mm; Negative IgM and positive IgG for Bartonella (1/1024 titers); normal liver enzymes. Biopsy of the right semilunar fold revealed subepithelial mixed inflammatory infiltrate, with scarce eosinophils, and immature granuloma and PCR for Bartonella was negative. Treated with prednisolone 2,5 mg/mL ointment for 1 week, and oral Azithromycin 500mg once-daily for 5 days, with resolution of her symptoms and reduction of ESR, CRP and Bartonella IgG titers (1/256).

Conclusions:

The unusual right edematous and salmon-pinked semilunar fold, without adjacent bulbar conjunctival hyperemia could initially suggest a lymphoproliferative disorder. A thorough clinical history was essential to guide our investigation, revealing recent contact with a feral cat. While serologic IgM for Bartonella was negative, high titers of IgG (1/1024) suggest recent infection and a later stage of Cat-scratch disease. The biopsy showed chronic non-specific inflammation with immature granuloma, without central stellate necrosis and negative specimen PCR, corroborating the hypothesis of initial ocular inoculation of Bartonella with subsequent perpetuating inflammation in the lymphoid tissue of the semilunar fold and regional lymph nodes.



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PP560

Sir WILLIAM BOWMAN 1st Baronet, the Great Anatomist, Pathologist and Surgeon Ophthalmologist, his Work, his Passion, his Devotion

Presenting author: Dr GEORGIOS BALANIKAS MD, PhD, Greece

Purpose:

Sir William Bowman is well known for his discoveries in histology and pathologic anatomy. Maybe he is not so well known as a surgeon ophthalmologist. In this presentation, we describe his contribution mainly to every aspect of Ophthalmology. We use the published works about every side of his engagement with this discipline and more. Our main tool stays 'The Collected Papers of Sir William Bowman'

Setting:

The facts took place in England in the 19th century (Birmingham and London) and this work was conceived and realized at the A' Ophthalmologic Clinic of Aristotle University of Thessaloniki.

Methods:

The reference work 'The Collected Papers of Sir William Bowman' is a valuable search of Bowman's contribution to Medicine. Too early, at the age of 25, he became famous for his description of the 'nephron's capsule of kidneys, the well-known 'Bowman's capsule' and the corneal layer called later 'Bowman's membrane'. These essays include detailed descriptions of ophthalmic anatomy, pathology, and physiology. Some of his key works are: 'On the Structure and Use of the Malpighian Bodies of the Kidney' and With Robert Todd, he published the five-volume 'Physiological Anatomy and Physiology of Man (1843–1856)' 'Cyclopaedia of Anatomy and Physiology (1852).

Results:

William Bowman had a long career in Medicine starting very early with surgeon Joseph Hodgson (1788-1869) at Birmingham General Hospital in 1832 and continuing in King's College London with the professor of Physiology Robert Bentley Todd. He presented his findings in 1842 in a paper to the Royal Society and was awarded the Royal Medal. He became a Surgeon ophthalmologist at the Royal London Ophthalmic Hospital (later known as Moorefield's Eye Hospital) inventing a number of surgical tools as irrigation probes, the lid speculum, etc. He supported warmly the wide use of the ophthalmoscope.

Conclusions:

Sir William Bowman was an inspired scientist of the 19th century who made great discoveries in many fields of our science (Anatomy, Pathology, Surgery, and Ophthalmology). He reformed the current mode and thought of Modern Medicine. He taught at King's College and, in 1880, founded the 'Ophthalmological Society', which was named later 'The Royal College of Ophthalmologists'. His scientific integrity and knowledge, his management of the patient, and his compassion for the weak gave him prestige and universal recognition. He made fundamental discoveries, applied surgical techniques, and invented surgical instruments. He has also been a distinguished ophthalmic surgeon designing surgical techniques and tools.



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PP561

Acute Macular Neuroretinopathy in a Patient with Acute Myeloid Leukemia and Deceased by COVID-19: A Case Report

Presenting author: Mojtaba Abrishami, Iran, Islamic Republic of

Purpose:

Acute macular neuroretinopathy (AMN) is a visual-deteriorating rare clinical entity with an uncertain etiology. We aimed to report a case of AMN and underlying disease of acute myeloid leukemia (AML).

Setting:

Eye Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

Methods:

A thirty-five-year-old female patient with bone marrow biopsy confirmed AML, and bicytopenia, under chemotherapy, complained of sudden paracentral visual field defect in her right eye was referred. Visual acuity was 20/20 in both eyes. Posterior segment evaluation revealed multiple Roth's spots.

Results:

Optical coherence tomography (OCT) demonstrated hyper-reflectivity band, in the outer nuclear layer and outer plexiform layer, nasal to the fovea of the right eye, and hyperreflective patch in outer retina segmentation en-face OCT, suggestive of the diagnosis of AMN. Nine days after AMN diagnosis, dyspnea, malaise, and cough was initiated. Ground glass opacities in lung CT scan, beside reverse transcription polymerase chain reaction of severe acute respiratory syndrome coronavirus-2, was conclusive of coronavirus disease 2019 (COVID-19). The patient deceased after six days.

Conclusions:

We report a rare case of AMN following AML. Our findings support the role of ischemia in the outer retina, of which AML may contributed to the pathophysiological process. The patient has deceased less than two weeks from AMN initiation.

Miscellaneous

PP562

Secondary papillary edema: Apropos of two cases

Presenting author: Zeinebou H'meimett, Morocco

Purpose:

The goal is not to miss a surgical emergency

Setting:

Morocco

Methods:

Subarachnoid hemorrhage or subarachnoid hemorrhage is defined as the eruption of arterial blood into subarachnoid spaces. The ruptured brain aneurysm is the most common cause in 85% of case. These are two patients, the first of which was a 48-year-old man with hypertension followed up presenting on admission a notion of sudden headaches with a progressive worsening over time associated with nausea and photophobia, the second young patient aged 13 without particular pathological history presenting diplopia with headaches immediately and signs of localization.

Results:

The ophthalmologic examination finds visual acuity preserved in the first patient, with an anterior segment which is calm, on the other hand the second patient also has good visual acuity at 8/10 but with a partial deficit of the third nerve (III). In the fundus, the presence of bilateral papillary edema without a chorioretinal focus is found. A brain CT scan with injection was requested which demonstrated the presence of subarachnoid hemorrhage (spontaneous hyperdensity) with ventricular flooding in our patients, and a mass effect in the young patient.

Conclusions:

Subarachnoid hemorrhage is a surgical emergency that is life-threatening as well as functional. Ophthalmologic signs may be indicative of intracranial hypertension.

Miscellaneous

PP563

The impact of COVID-19 related lockdown on ophthalmology residents for cataract surgery learning curve

Presenting author: Mahmoud Kesba, Egypt

Purpose:

To assess residents' performance of cataract surgery and determine which steps of the procedure are most difficult to learn and how covid 19 lockdown affected their learning curve .

Setting:

Mataria teaching hospital

Methods:

Cataract surgery was divided into steps and each step was given a proficiency grade. All intraoperative complications were recorded and analyzed for three levels of residents.

Results:

The most commonly encountered difficulty factors were hard nucleus , small pupil , and white cataract . Capsulorhexis, nucleus disassembly and Cortex removal were the most difficult steps to learn. Posterior capsular rupture was the most common complication . Residents with level 2 and level 3 showed reduced in proficiency grading comparing with their performance before Covid-19 lockdown, while with level 1 showed stationary proficiency.

Conclusions:

Learning curve for phacoemulsification needs continues performing of cataract cases until reach to specific level without interrupting period which considered to be a stationary point for learning curve .

Miscellaneous

PP681

Intraorbital foreign body: when the foreign body is extremely large and damage is extremely small (about one case)

Presenting author: Amina Abounaceur, Morocco

Purpose:

Perforating orbital traumas are relatively rare and potentially serious events, the management of which must take into account the nature of the projectile, its path and the associated cranial, ocular, sinus or facial damage . Imaging is an essential part of the lesion assessment.

Setting:

We report the case of an orbital trauma penetrating by a huge dilapidated foreign body , which had no functional or anatomical consequences on the eyeball or on the orbito- cranial bone framework .

Methods:

A 21-year-old patient, victim of a periorbital trauma, by the rear projection of a large fragment of mold, having caused a left periorbital wound. We find visual acuity in the left eye at 1/10, eye tone normal, a jagged and deep periorbital wound, extending from the eyebrow to the malar region, measuring approximately 7 cm in height. length; presence of a penetrating metallic-looking foreign body in contact with the upper rectus muscle. Normal ocular motility . Examination of the anterior segment was normal. At the fundus there is an area of retinal ischemia, flat retina, normal macula and papilla.

Results:

On a cranio-orbital scan there is a large foreign body from the left orbit, measuring approximately 75 mm, with a solution of continuity of the periorbital soft parts with a pneumo-orbit. On exploration we note the tearing of the external canthal tendon; while the elements of the eyeball, lacrimal gland, optic nerve and oculomotor muscles were intact .The gentle extraction of the foreign body, was uneventful. The clinical course was spectacular marked by good clinical and functional recovery after four months of surveillance, with visual acuity which increased up to 6 /10 and good wound healing.

Conclusions:

The nature and size of foreign body vary widely; they can be responsible for complications of the orbit at the same time local, with infectious risk , hemorrhagic or regional in the event of intracranial or sinus attack and finally general. Depending on the damage achieved, we can distinguish pure orbital, orbito-ocular, or orbito-cranial foreign bodies. A foreign body entering the orbit without causing eye damage remains an exceptional situation. Thus the foreign bodies of the orbit give multiple and varied pictures, which can be unharmed despite an apparently serious clinical picture, or be life-threatening in a few situations.

Miscellaneous

PP730

Diabetes and Hypertension Rates Among Cataract Patients Living in Rural Cambodia

Presenting author: Niraj Mandal, United Kingdom

Purpose:

We report data on random capillary blood glucose (CBG) and blood pressure (BP) measurements and assess disease awareness among patients from rural Cambodia undergoing review for possible cataract surgery. We report data on random capillary blood glucose (CBG) and blood pressure (BP) measurements and assess disease awareness among patients from rural Cambodia undergoing review for possible cataract surgery.

Setting:

Khmer Sight Foundation, Phnom Penh, Cambodia

Methods:

Retrospective cross-sectional study of 794 patients from rural Cambodian communities. Random CBG measurements and BP readings were taken for all patients pre-operatively during primary screening and were also asked questions regarding awareness of their current health status.

Results:

The mean age was 65.5. 88.9% (n=706) of patients had either elevated CBG levels or elevated BP. The mean CBG was 135.9 mg/dL and 10.5% of patients had a random CBG compatible with a diagnosis of diabetes. The mean systolic BP was 137mmHg (SD±20.5mmHg, range 64-236mmHg) and the mean diastolic BP was 86mmHg (SD±13.9mmHg, range 52-172mmHg), with 79.8% of patients having a BP compatible with diagnosis of hypertension. Of 100 patients with CBGs above 160 mg/dL only 43% (n=43) were able to give their medical history. Of 693 patients with BP≥129/80 only 24.0% (n=167) were aware of their condition.

Conclusions:

Our study shows that the rates of diabetes and hypertension are high and that patient health state awareness is poor. At present there is no known formal diabetic retinopathy screening programme in Cambodia. As a result of this data, the non-profit Khmer Sight Foundation has secured funding for four mobile retinal screening units which will be able to accompany the charity when visiting rural locations to establish which patients are at high risk of losing vision from diabetes.