

Miscellaneous

EXTRA CO-AUTHORS: Cataract surgery indications and complications in relation to anesthesia as reflected in the European Registry of Quality Outcomes for Cataract and Refractive Surgery (EUREQUO)

Presenting author: Maartje Segers, Netherlands

Session name: Miscellaneous

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:06 - 08:12

Location: Auditorium

Purpose:

To analyze the relation between different anesthesia techniques and complications in cataract surgery.

Setting:

Clinics affiliated with the European Registry of Quality Outcomes for Cataract and Refractive Surgery (EUREQUO).

Methods:

Data were obtained from the EUREQUO between January 1, 2008, and December 31, 2018. The registry contains data on anesthesia techniques (topical, topical and intracameral, subtenon, peribulbar, retrobulbar, and other anesthesia techniques), intraoperative and postoperative complications (posterior capsule rupture (PCR), dropped nucleus, iris damage, cornea edema, inflammation, high intraocular pressure (IOP), comorbidities, and demographics). A backward stepwise multivariate logistic regression model was constructed for each complication with variables that were significant in the univariate analysis to estimate the (adjusted) odds ratio (aOR) and 95% confidence intervals (CI). A p-value of 0.05 was considered significant.

Results:

Complete data of 1,720,048 cataract surgeries was available. There was an increasing trend in topical anesthesia, and a decreasing trend in subtenon, peribulbar, and retrobulbar anesthesia ($p < 0.001$). In the multivariate analyses, subtenon anesthesia had a higher risk of dropped nucleus and iris damage compared to topical anesthesia (aOR 1.52, 95%CI 1.29-1.78, $p < 0.001$ and aOR 1.20, 95%CI 1.12-1.29, $p < 0.001$). Retrobulbar anesthesia had a lower risk of PCR and iris damage compared to topical anesthesia (aOR 0.80, 95%CI 0.75-0.84, $p < 0.001$ and aOR 0.82, 95%CI 0.74-0.91, $p < 0.001$). Topical plus intracameral anesthesia had a higher risk of postoperative complications compared to topical anesthesia ($p < 0.001$).

Conclusions:

An association between anesthesia techniques and intraoperative and postoperative complications during cataract surgery was identified based on the EUREQUO.



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Returning experiences of cataract surgeons after a hiatus: A UK survey report

Presenting author: Laura Maubon, United Kingdom

Session name: Miscellaneous

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:12 - 08:18

Location: Auditorium

Purpose:

Cataract surgeons may periodically take time away from operating which can lead to skills fade. There is paucity of research investigating the experiences of returning cataract surgeons and how different individual circumstances impact on their return. Our aim was to investigate the subjective experiences of UK ophthalmologists simultaneously returning to surgery following the nationwide elective surgical hiatus due to the Covid-19 pandemic

Setting:

UK nationwide survey to members of RCOphth

Methods:

An online survey was nationally distributed between 01/09/2020 - 29/10/2020 to registered UK ophthalmologists. Participants indicating a surgical hiatus of 8 weeks or more were included.

Results:

232 of 264 responses were analysed. Covid-19 was the most frequent reason for a surgical hiatus (median 15 weeks). Perceived operating difficulties were found in 29.1%. Transient anxiety (51.7%), reduced confidence and perceived increased surgical time were commonplace. Trainees and females were more likely to encounter negative experiences ($p < 0.001$) and barriers to resource accessibility. Eyesi[®] and online videos were the most available and accessed pre-return resources. Childcare was five times more likely to present as a barrier to resource access for females than males.

Conclusions:

Technical skills fade such as capsulorhexis difficulties were commonly perceived by trainee surgeons in addition to transient anxiety, reported in more than half of all surgeons following a hiatus as short as 8 weeks. Eyesi[®] simulation offers potential to negate technical de-skilling. Few had formal return plans or awareness of RCOphth guidance. We believe there is scope for more specialised and targeted support for future returning cataract surgeons thereby optimising patient care.



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Simulated cataract surgery training of the non-dominant hand to improve confidence and bimanual performance

Presenting author: Carl Mulholland, United Kingdom

Session name: Miscellaneous

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:24 - 08:30

Location: Auditorium

Purpose:

The benefits of simulation training are increasingly being recognised in the ophthalmic surgical curriculum. Virtual reality simulation allows repetition of a surgical task in a non-risk environment to ensure familiarity with a procedure, and hopefully improved manual dexterity. There is no formal assessment for trainee surgeons (either in simulation or in vivo) documenting non-dominant hand development. We wished to establish objectively if training of the non-dominant hand would improve bimanual function and surgical performance, and investigate if improving trainees' bimanual surgical competence resulted in improvements in confidence.

Setting:

Ophthalmic trainees in Glasgow, UK, who had previously used the EYESI simulator (VRmagic Holding AG, Mannheim, Germany) and completed modules A and B for intra-ocular training, were invited to participate in the study in May 2020. The study was carried out in a public (NHS) tertiary Ophthalmology hospital.

Methods:

Participants performed forceps training with their dominant hand to re-familiarise themselves with the simulator. They then completed a bimanual training task three times to obtain a pre-training baseline measure. A 20-minute bespoke training module which involved performing single-handed tasks with the non-dominant hand alone was undertaken. Participants then completed the same bimanual training task three times to obtain a post-training result. The median score from the 3 attempts at the bimanual training task pre- and post- training per participant was compared using the Wilcoxon Signed-Rank test. A validated self-confidence survey was completed at the start and end of the study.

Results:

16 trainees participated (8 male, 8 female; median age 29 years (26-35)). 7 were year ST1-3 (junior), 9 were ST4-7 (senior). Median completed cataract operations were 155 cases (1-730). 15 (93.8%) stated right-hand dominance, with median Edinburgh Handedness Index score of 87.5. Median self-confidence scores increased significantly following training (12.5/30 vs 16/30; $t=5.1194$, $p<0.05$). Bimanual training module median total score improved significantly following training (76.5 vs 77.8; $p<0.05$), as did reduced task time (51.8s vs 44.1s; $p<0.05$) and reduced odometer speeds (103.68mms-1 vs 92.66mms-1; $p<0.05$). Unintended 'movement off sphere' instances reduced from pre-training range 3-30 to post-training range 3-18 ($p<0.05$).

Conclusions:

We have demonstrated that the EYESI simulator can train the non-dominant hand in intra-ocular surgery, resulting in significant improvements in competence performing bimanual tasks. Our study demonstrated a statistically significant improvement in total scores, odometer movements, duration of task times, and reduced instances in slipping out of sphere, which demonstrates that bimanual control improved in our cohort. Such improved competence due to intentional training correlated with increased self-confidence regarding non-dominant hand use amongst participants. Targeted non-dominant hand training should be included in future cataract simulation modules. Engagement with bimanual surgical simulation training could also help trainers if supervising alternate-handed trainees.



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A retrospective audit of incidence and subsequent management in cases of post-operative endophthalmitis in a large tertiary Ophthalmic centre in the UK

Presenting author: Shane D'Souza, United Kingdom

Session name: Miscellaneous

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:30 - 08:36

Location: Auditorium

Purpose:

Endophthalmitis remains a significant complication that can be seen after post-operative intraocular procedures. These procedures have risen dramatically in recent years, following the widespread use of anti-VEGF treatments. Developments in standards of care such as the use of disposable surgical instruments and the routine use of intracameral antibiotics in cataract surgery have been shown to reduce the incidence of endophthalmitis but “outbreaks” continue to be documented in the literature. This retrospective audit aims to identify the incidence of post-operative endophthalmitis, broken down by surgical procedure and to assess the subsequent management in locally identified cases versus published standards.

Setting:

A tertiary referral NHS ophthalmic centre in the North West of England, United Kingdom.

Methods:

All cases of diagnosed post-operative endophthalmitis were identified between August 2018 and January 2021 from an electronic register. Cases of suspected endogenous endophthalmitis were excluded as well as referred cases where the immediately preceding surgical intervention (hereon named, ‘index procedure’) was performed elsewhere. Details of each case, including demographics, past ophthalmic history, index procedure, presentation of endophthalmitis and subsequent management were collected retrospectively from patient electronic records. Each case was scrutinised against locally set standards from previous audits and internationally published standards.

Results:

19 cases of post-operative endophthalmitis were identified out of a total 35,243 intraocular procedures. 10 surgical cases were identified in a total of 9,858 ocular surgical cases (rate 1.01 per 1,000). Nine intravitreal cases were identified in a total of 24,592 intravitreal procedures (rate 0.37 per 1,000). The post-phacoemulsification rate was 0.17 per 1,000. There were 11 (58%) culture-positive cases; with staphylococci and streptococci accounting for 91% of positive cultures. All identified cases received prompt intraocular injection of ciprofloxacin and/or vancomycin. Poor visual acuity at presentation, age and the presence of significant medical co-morbidities were associated with poorer visual outcomes.

Conclusions:

This study contributes valuable data in the incidence and outcomes of post-operative endophthalmitis. Our global endophthalmitis rates are comparable to published standards. Our post-cataract surgery endophthalmitis rate is favourable and improved on previous locally established rates. Endophthalmitis remains a rare but visually significant risk of intraocular procedures. Clinicians should continue to undertake a detailed risk-benefit analysis with each planned intraocular procedure. This study goes on to identify independent risk factors for the incidence of endophthalmitis, to assess final visual outcomes in identified cases and suggest local amendments in our standard of care.



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The Clinical Manifestations of Ocular MRSA and its Burden on the Delivery of Eye Care

Presenting author: Deirdre Harford, Ireland

Session name: Miscellaneous

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:36 - 08:42

Location: Auditorium

Purpose:

The aim of this study was to describe the clinical manifestations, departmental burden and antimicrobial resistance patterns of MRSA eye infections and ocular carriage of MRSA and to recommend a streamlined protocol for the management of ocular MRSA colonisation detected by pre-operative screening.

Setting:

Royal Victoria Eye and Ear Hospital Dublin Ireland.

Methods:

We conducted a retrospective review of all the ocular samples which isolated MRSA taken over a 7-year period, from 1st January 2013 to 31st December 2019, at RVEEH, the national tertiary referral hospital in Ireland for eye diseases. A review of the hospital microbiology laboratory information system was conducted to identify cases. We documented the site that the sample was taken from and the antibiotic sensitivity results. A review of patient records was conducted and information regarding patient demographics, clinical presentation, diagnosis, treatment and outcome was obtained where possible.

Results:

185 samples taken from the ocular surface were MRSA positive. The majority were MRSA colonisation of the ocular surface obtained as part of an MRSA screen (139/6955 patients screened; 2%). Forty-six represented MRSA infections (46/7904 eye samples; 0.58%), the majority of whom had known local or systemic risk factors for colonisation. Conjunctivitis was the most common presentation (n=24), followed by pre-septal cellulitis (n=9). MRSA infections with the poorest clinical outcomes and the longest inpatient stay, were keratitis (n=6) and post-operative endophthalmitis (n=2). Our findings demonstrated over 60% resistance to azithromycin, fusidic acid and ciprofloxacin, although resistance to chloramphenicol was uncommon.

Conclusions:

Our study demonstrates that MRSA infections of the eye most commonly manifest as a mild infection, typically conjunctivitis, and are generally non-sight threatening. The majority of presentations in our study occur in the context of known MRSA risk factors and in an older populous. Resistance to chloramphenicol is rare, thus it remains an excellent first line treatment. Its use to eradicate MRSA from the ocular surface is proposed to streamline the delivery of surgical eye care. These findings are of particular importance during the COVID-19 pandemic as wait times for many procedures have been extended.

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Antifungal Efficacy of the Narrow-Band Ultraviolet (UV) Light in Decontamination of potentially contaminated Donor Corneal grafts for DSAEK – Preliminary Results

Presenting author: Eric Abdullayev, United States

Session name: Miscellaneous

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:42 - 08:48

Location: Auditorium

Purpose:

Candida Albicans (CA) keratitis may develop after Descemet Stripping Automated Endothelial Keratoplasty (DSAEK) due to fungal contamination of the donor grafts. FDA approved cornea storage media do not contain an antifungal additive. The efficacy of Narrow-Band 222 UV light studied in reducing of potential fungal contamination of the donor grafts contaminated during microkeratome preparation

Setting:

Laboratory study at Lions Eye Institute for Transplant and Research

Methods:

4 donor grafts for DSAEK prepared with use of microkeratome. Stromal surfaces of grafts and caps were contaminated with patient isolate CA and then exposed to 222 nm UV light for 60 sec from distance 5.0 cm. Fungal culturing was performed prior to CA contamination, post contamination, immediately after UV light application. Corneal endothelium of each graft was evaluated by specular microscopy, cell staining prior to and at 10 min, 1,3,6,9 days post UV light application. Corneal endothelium of 4 donor grafts for DSAEK not exposed to UV light evaluated as control. Images digitally processed by "ImageJ" image processing program.

Results:

All fungal cultures were negative (100%) prior to CA contamination of the grafts and caps stromal surfaces and were all positive (100%) after contaminated. There was no growth of CA (all cultures were negative) after 60 seconds UV light exposure from distance 5.0 cm. No endothelial damage was observed after 60 seconds of UV exposure from distance 5.0 cm.

Conclusions:

Our study confirms efficacy of the Narrow-Band 222 nm Far UV light in antifungal decontamination of the microkeratome prepared donor grafts for DSAEK. Narrow-band UV light is safe for the endothelium at 60 seconds at the prescribed distance

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Microsporidial infectious crystalline keratopathy after penetrating keratoplasty

Presenting author: Nicolò Ciarmatori, Italy

Session name: Miscellaneous

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 08:54 - 09:00

Location: Auditorium

Purpose:

To report the clinical outcomes of microsporidial infectious crystalline keratopathy occurring after penetrating keratoplasty (PK)

Setting:

Tertiary Care Referral Center (Ospedali Privati Forlì, "Villa Igea", Forlì, Italy)

Methods:

This retrospective case series evaluates 3 eyes of 3 patients who developed microsporidium infection presenting as infectious crystalline keratopathy after PK. Clinical presentation, surgical management and long-term outcomes are reported. Median follow-up was 5 years (range: 5-10 years).

Results:

In 3 eyes, branching crystalline stromal deposits were noted after PK. Vision was limited to counting fingers in 1 case and hand motion in the rest. No response was observed to broad-spectrum topical antibiotics; thus, all eyes underwent excisional PK. Histologic examination was consistent with microsporidial keratitis. Topical fumagillin was started and tapered over at least 18 months after therapeutic keratoplasty. Two of 3 eyes developed recurrent infection and all cases developed at least 1 episode of rejection. Repeat keratoplasty was required and clinical resolution was achieved in all eyes. Final Snellen visual acuity was 20/50, 20/63, and hand movement.

Conclusions:

Microsporidial keratitis must be considered in the differential diagnosis of infectious crystalline keratopathy. These infections are often recalcitrant to medical therapy alone and invariably require excisional keratoplasty. Considering the risk of recurrent infection and immune rejection, close monitoring, prolonged medical therapy and even repeat keratoplasty are necessary for long-term infection control and visual rehabilitation.



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Ocular Manifestations of Hospitalized Patients with COVID-19 in Northeast of Iran

Presenting author: Mojtaba Abrishami, Iran, Islamic Republic of

Session name: Miscellaneous

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 09:00 - 09:06

Location: Auditorium

Purpose:

To evaluate ocular findings in patients with Coronavirus Disease 2019 (COVID-19) in the Northeast of Iran.

Setting:

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

Methods:

In a cross-sectional, observational study all consecutive patients with confirmed COVID-19 diagnosis at the central referral center of these patients in northeast of Iran were included. Ocular examinations (external and slit) were randomly performed for the patients who were admitted to the Intensive Care Unit (ICU) and six COVID wards of the hospital. Moreover, Chart records and serum chemistry results were collected.

Results:

A total of 142 patients with the mean age of 62.6 ± 15 years and almost equal gender distribution (male: $N=77, 54.2\%$) were included. In external examination, 44 (31%) patients had conjunctival hyperemia and 22 (15.5%) patients had chemosis. Consecutive slit examination showed 41 (28.9%) conjunctival hyperemia, 22 (15.5%) chemosis, 11 (7.7%) cataract, and 9 (6.3%) diabetic retinopathy. None of the patients reported ocular symptoms prior to systemic involvement. The proportion of patients with at least one ocular manifestation was significantly higher in those admitted in the ICU compared to the non-ICU wards. While conjunctival hyperemia was the most prevalent ocular finding in all patients, chemosis was the most common ocular manifestation in ICU admitted patients.

Conclusions:

We found a high frequency of ocular manifestations in at least hospitalized COVID-19 patients. Moreover, the ocular involvement could be the presenting finding of disease. Hence, we believe that ophthalmologist should be a member of the therapeutic team for comprehensive management of these patients.



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Impact of Coronavirus pandemic on Ophthalmology emergency department practice – a retrospective review

Presenting author: Luís Bernardes, Portugal

Session name: Miscellaneous

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 09:06 - 09:12

Location: Auditorium

Purpose:

The COVID-19 pandemic outbreak had a huge impact on the access and adherence of patients to care related to non-respiratory illness in general and ophthalmological maladies in particular around the world. The purpose of this study is to evaluate the impact of COVID-19 on an ophthalmology tertiary emergency department, with regards to patients admitted and most prevalent diagnosis, in order to plan for new outbreaks.

Setting:

Centro Hospitalar e Universitário de Coimbra, Portugal

Methods:

A retrospective observational study was conducted on all patients admitted to the Ophthalmology emergency department, from March 1st through June 30th 2020. Number of visits and diagnosis were compared with 2019 data.

Results:

The number of patients admitted in the study period fell from 5709 in 2019 to 3490 in 2020 ($p=0,008$). The decrease was steeper in the months with the greatest increase in new COVID-19 infections, with April experiencing a reduction from 1377 visits in 2019 to 649 in 2020. Diagnosis of acute conjunctivitis and conjunctival hemorrhage suffered the greatest decrease, with $p=0,001$ (from 400 and 374 in 2019 to 134 and 167 in 2020, respectively). Retinal detachments increased from 40 to 55 ($p=0,141$) and vitreous hemorrhage from 73 to 118 in 2020 ($p=0,067$).

Conclusions:

The pandemic outbreak in early 2020 was associated with a marked decrease in emergency department consultations in Ophthalmology, especially for less serious illness and conjunctivitis, partially preventable with hygiene measures widely adopted in the pandemic period. Urgent and sight-threatening maladies did not decrease during this period. There seems to be a link between poorer control of the pandemic and worst access to urgent eye care.

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Evaluation of tear parameters and meibography in chronic smokers

Presenting author: Leyla Hazar, Turkey

Session name: Miscellaneous

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 09:12 - 09:18

Location: Auditorium

Purpose:

Evaluation of tear function test and meibomian glands area (MGA) with Sirius device (Sirius, CSO, Florence, Italy) in young adults who have been smoking for at least 5 years

Setting:

Cross sectional study

Methods:

In this study, 35 eyes of 35 chronic smokers who applied to the ophthalmology clinic for routine eye examination or dry eye complaints and 32 eyes of 32 healthy non-smokers as control group were included. Along with a complete ophthalmological examination, tear break-up time (TBUT), Ocular Surface Disease Index (OSDI), and loss of MGAs and noninvasive BUT with a Sirius device were evaluated. All participants were examined and measured before noon.

Results:

The OSDI score in smokers was 22.15 ± 6.65 and 8.75 ± 3.03 in the control group ($p < 0.001$). Mean TBUT and non-invasive first BUT were found significantly shorter in smokers than control group ($p < 0.001$, $p = 0.026$ respectively). The mean loss of lower eyelid MGA was 14.15 ± 3.49 (%) in smokers and 11.95 ± 2.75 (%) in the control group ($p = 0.007$). Loss of the upper eyelid MGA was 12.67 ± 5.20 (%) in smokers and 10.22 ± 4.28 (%) in the control group ($p = 0.039$).

Conclusions:

Chronic smoking causes deterioration in both the OSDI score and quantitative measurements including meibomography. OSDI score increased in correlation with the increase of upper and lower eyelid meibomian gland area loss.



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Efficacy of A Five-Flash Intense Pulsed Light Therapy Technique in Patients with Meibomian Gland Dysfunction: A Randomized Controlled Trial

Presenting author: Siamak Zarei-Ghanavati, Iran, Islamic Republic of

Session name: Miscellaneous

Date and time: 10 October 2021, 08:00 - 09:30

Presentation time: 09:18 - 09:24

Location: Auditorium

Purpose:

To assess the efficacy of a five-flash intense pulsed light (IPL) technique in patients with meibomian gland dysfunction (MGD).

Setting:

Noorafarin Eye Clinic, Mashhad University of Medical Sciences, Mashhad, Iran.

Methods:

In a randomized controlled trial, 100 symptomatic MGD patients were enrolled. The treatment group underwent three sessions of a five-flash IPL therapy. For all participants, eyelid warming, lid hygiene and lubricant therapy was prescribed. Ocular surface parameters were compared for control and treatment groups.

Results:

Ocular Surface Disease Index (OSDI), non-invasive keratograph tear break up time (NIK BUT), fluorescein TBUT, MG expressibility, meibum quality and tear osmolarity were improved at follow up visits in both groups ($p < 0.05$). The IPL treatment effect was not statistically significant ($p > 0.05$), except for bulbar and limbal hyperemia ($p = 0.017$ and $p = 0.018$). In both groups, younger patients showed more improvement in NIK BUT ($p = 0.024$, $p < 0.001$).

Conclusions:

The five-flash IPL therapy combined with conventional home-based therapy is effective for patients with MGD. Younger patients may preferentially benefit from IPL.

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Normative data of essential tomographic parameters for healthy and keratoconus eyes based on Scheimpflug tomography – an interim report

Presenting author: Gerd Auffarth, Germany

Session name: Imaging Anterior Segment

Date and time: 10 October 2021, 13:15 - 14:45

Presentation time: 14:21 - 14:27

Location: Hall 13 / Elicium Ballroom

Purpose:

To establish normative data for numerous parameters of the anterior eye segment for the Pentacam of a healthy and a pathological (keratoconus) population.

Setting:

Dept. of Ophthalmology, University of Heidelberg

Methods:

Retrospective analysis of phakic eyes without any known ocular pathologies (healthy eyes - H) and eyes with keratoconus (KC) with a BAD D-Value of ≥ 3 . Measurements were taken with either a Pentacam HR, AXL or AXL Wave and only measurements with good quality scores were considered. The following tomographic parameters were analysed: Chord μ , Chord α , B/F Ratio, Pachymetry (vertex, thinnest and their difference) and Total Corneal HOA (4mm zone). Mean values and standard deviations were calculated for both study groups, means were compared with an independent t-test.

Results:

Healthy eyes of 112 patients (110 right and 108 left eyes) with a mean age of 43 ± 16 years were analysed. The keratoconus population included 74 patients (52 right and 48 left eyes) with a mean age of 34 ± 11 years. Pachyvertex: mean= $546\text{H}/487\text{KC } \mu\text{m}^* \pm 32,3\text{H}/40,0\text{KC}$; Pachythinnest: mean= $541\text{H}/473\text{KC } \mu\text{m}^* \pm 32,7\text{H}/39,8\text{KC}$; PachyDiff: mean= $4,6\text{H}/13,4\text{KC } \mu\text{m}^* \pm 2,8\text{H}/6,7\text{KC}$; Chord μ : mean= $0,22\text{H}/0,36\text{KC } \text{mm}^* \pm 0,13\text{H}/0,19\text{KC}$; Chord α : mean= $0,45\text{H}/0,47\text{KC } \text{mm} \pm 0,14\text{H}/0,16\text{KC}$; B/F Ratio: mean= $82,3\text{H}/81,5\text{KC } \%^* \pm 1,4\text{H}/1,7\text{KC}$; Total Corneal HOA: mean= $0,131\text{H}/0,832\text{KC } \mu\text{m}^* \pm 0,073\text{H}/0,527\text{KC}$. An asterisk indicates a significant difference ($p < .05$) between the means.

Conclusions:

The analysis of this ongoing study provides an excellent basis in order to classify new patient measurements whether they are within the distribution of a healthy or keratoconus population. The three pachymetric values and the Total Corneal HOAs showed, as expected, significantly different means for the two study groups. However, other parameters like Chord μ and the B/F Ratio, which are less obvious to be affected by the disease, were also significantly different. Only Chord alpha seemed not to be affected, nevertheless it remains to confirm the results for a larger study population.

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Laser Eyebrow Removal Induced Anterior Uveitis

Presenting author: albandary alhamzah, Saudi Arabia

Session name: ORBIS

Date and time: 11 October 2021, 11:30 - 13:00

Presentation time: 00:00 - 00:00

Location: Hall 11

Purpose:

This study reports the case of a female patient with acute bilateral non-granulomatous anterior uveitis (AC) caused by alexandrite laser-assisted hair removal of the eyebrows.

Setting:

Private eye clinic in Riyadh, Saudi Arabia.

Methods:

We report a 22-year-old female who experienced bilateral continuous eye pain, redness, and photophobia for three days after undergoing alexandrite (755 nm) laser epilation of both eyebrows while not wearing protective eyewear or corneal shield. The eye examination included visual acuity, slit-lamp examination, tonometry, Optical Coherence Tomography (OCT), and fundoscopy for both eyes (OU). The follow-up period was 1 week.

Results:

Eye examinations revealed uncorrected visual acuity (VA) was 20/20 OU and normal Intraocular pressure. Slit-lamp examination of the AC showed ciliary injection, 2+/3+ cells, and iris pigments OU. Fundus examination and OCT results were unremarkable OU. Topical steroids hourly were prescribed, one day later, there was a reduction in AC cells to 1+/2+. The patient used topical prednisolone eye drops every three hours per day instead of every hour. One week later, her eyes were white, and anterior chamber cells were 1+ to clear, VA was 20/20 OU; slit-lamp, IOP, and fundus examination OU remained normal.

Conclusions:

When Alexandrite lasers are used peri-ocularly without proper eye protection, they might produce irreversible ocular complications. This case demonstrates the importance of proper eye protection with periocular laser procedures.