



Abstract Journals review

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Cancer Risk in Patients With Fuchs Endothelial Corneal Dystrophy

- **Conclusions:** Patients with FECD aged 65 years or older may be at increased risk for cancer at several anatomic locations. Follow-up studies are needed to further explore the association of FECD and malignancy, elucidate potential disease mechanisms, and identify genetic and/or environmental risk factors.



Reversible Corneal Decompensation Caused by a Topical Dorzolamide/Timolol Fixed Combination After Descemet Stripping Automated Endothelial Keratoplasty

- **Conclusions:** Topical DTFC should be used with caution after corneal endothelial transplantation because of the possibility of iatrogenic corneal endothelial dysfunction.



Corneal Endothelial Dysfunction as a Manifestation of Digoxin Toxicity

- **Conclusions:** We encountered 1 case of corneal edema secondary to corneal endothelial dysfunction in a patient with digoxin toxicity. Special care should be taken to elicit a complete history because ocular signs can be manifestations of systemic alterations with vital importance for patients.



Acute Corneal Transplant Rejection After Severe Acute Respiratory Syndrome Coronavirus 2 mRNA-1273 Vaccination

- To the best of our knowledge, this case of full-thickness graft rejection after the Moderna SARS-CoV-2 mRNA vaccination is the first to be reported worldwide. The temporal relationship between vaccination and subsequent rejection is highly suggestive of causation due to the short interval (3 days) between vaccination and rejection and the lack of other inciting factors in an otherwise healthy graft. Patients with corneal transplants who plan to take the COVID-19 vaccinations should be counseled on symptoms and closely monitored, and an individualized plan should be made in discussion with the ophthalmologist.



Bilateral Corneal Ectasia 3 Years After Small Incision Lenticule Extraction in a Borderline Case

- Results: A 22-year-old man developed bilateral corneal ectasia after SMILE. The preoperative corneal topography of the right eye was unremarkable, with a minimum corneal thickness of 511 μm in the right eye, and the abnormal corneal topography of the left eye revealed a risk factor for developing ectasia, with a minimum corneal thickness of 514 μm in the left eye. The refractive error was -4.50 to 3.50×10 degrees in his right eye and -4.25 to 3.50×0 degrees in his left eye with a best-corrected visual acuity of 20/20. An uncomplicated SMILE was performed; after his last follow-up visit at 1 month, the patient was lost to follow-up for 3 years. After that time, he presented with visual loss with left predominance. Bilateral ectasia was diagnosed through corneal topography, and crosslinking was performed in both eyes.
- Conclusions: There are a very few reports of corneal ectasia after SMILE with normal preoperative topography.



Impact of Graves Disease on Ocular Surface and Corneal Epithelial Thickness in Patients With and Without Graves Orbitopathy

- GD negatively influenced ocular surface and CET, with a higher level of eye dryness and corneal thinning regardless of GO status, suggesting that subclinical chronic inflammation may play a role in the pathogenesis of tear film and ocular surface stability.



Management of Keratoconus in Down Syndrome and Other Intellectual Disability

- KC is strikingly prevalent in the ID population. Ireland has the highest rate of Down syndrome in Europe (26.3:10,000 live births). This group is rarely suitable for corneal transplantation, and corneal collagen crosslinking is an effective intervention to prevent progression to advanced KC in this already socially restricted group. We propose an algorithm for investigation/treatment and also recommend uniform pediatric KC screening/treatment in ID populations.



Rapid Macular Thinning Is an Early Indicator of Hydroxychloroquine Retinal Toxicity

- Retinal thickness remains stable for many years in most patients receiving long-term hydroxychloroquine therapy, but after a critical point, the retina may begin to thin rapidly. Sequential plots of inner and outer ETDRS ring macular thickness provide objective evidence of this early structural change several years before conventional signs appear. This approach can alert patients and prescribing physicians to potential retinal damage and uses readily available OCT measurements that could be automated by manufacturers for use in comprehensive eye care settings.



Comparison of age-related vascular changes in the optic disc of patients with diabetes, with glaucomatous and non-glaucomatous features

- **Conclusion:** Patients with diabetes show progressive reduction of vessels and neuroretinal rim at the optic disc, which is more intense in association with glaucoma. In the absence of glaucoma, the temporal sector of the diabetic rim was not reduced but thickened, displacing the cup nasally.



Persistent reduction of retinal microvascular vessel density in patients with moderate and severe COVID-19 disease

- Conclusion: We demonstrated persistent reduction in the central vascular area over time in patients with moderate and severe COVID-19.



Avoiding mask-related artefacts in visual field tests during the COVID-19 pandemic

- Conclusion: Unfitted masks can simulate VF progression in around 6% of cases, mainly in the inferior hemifield, and increase significantly the rate of fixation losses. A similar rate of artefacts was observed using FFP2/KN95 or surgical masks. The use of a surgical mask with an adhesive tape covering the superior border may reduce mask-related artefacts, although concomitant progression cannot be ruled out in all cases.



Association between body mass index and diabetic retinopathy in Asians: the Asian Eye Epidemiology Consortium (AEEC) study

- Conclusions: Among Asian adults with diabetes, both BMI and obesity showed an inverse association with DR. These findings warrant confirmation in further longitudinal studies.



Contrast sensitivity function in patients with macular disease and good visual acuity

- Conclusion CSF measured with the qCSF active learning method was found to be significantly reduced in eyes affected by macular disease despite good VA compared with healthy control eyes. The qCSF method is a promising clinical tool to quantify subtle visual deficits that may otherwise go unrecognised by current testing methods.



Trabeculectomy in patients with diabetes: subconjunctival Mitomycin C with or without intravitreal bevacizumab

- Conclusion In patients with diabetes with primary trabeculectomy, combined administration of intravitreal bevacizumab and subconjunctival MMC resulted in lower IOP and number of antiglaucoma medication compared with subconjunctival MMC alone.



Teprotumumab reduces extraocular muscle and orbital fat volume in thyroid eye disease

- Conclusion Orbital imaging demonstrated decreased EOM volumes and orbital fat tissue volumes after teprotumumab treatment.



Retinal findings in hospitalised patients with severe COVID-19

- Conclusion These findings suggest that patients with severe COVID-19 have acute vascular lesions of the inner retina including flame-shaped haemorrhages and cotton wool spots. Further studies controlling for confounding factors are necessary to properly assess these findings so as to increase the understanding of COVID-19 pathophysiology and to identify new therapies.



Transepithelial Photorefractive Keratectomy Compared to Conventional Photorefractive Keratectomy: A Meta-Analysis

- Conclusion and Clinical Significance
- Based on the evidence generated in this study, TPRK presents a dominance over the conventional PRK in the accuracy of the procedure as inferred from the predictability outcome comparison measures. The clear lead of TPRK over the conventional PRK in all the secondary outcomes is a sign of less postoperative complications with the TPRK procedure. A greater acceptance of the patients in terms of pain levels and postoperative satisfaction levels of the TPRK is very promising and raises confidence in them for repeating the procedure. In conclusion, TPRK can be suggested as an alternative surgical procedure to the conventional PRK for all types of refractive errors, in terms of its accuracy, postoperative complications, patient comfort, and acceptance.



Assessment of the Effect of Wearing a Surgical Face Mask on Tear Film in Normal Eye Subjects

- Conclusions
- Wearing a surgical face mask for a short duration of one hour has an effect on the ocular tear film in normal eye subjects. Dry eye symptoms and tear break-up increased after wearing a face mask compared with those experienced before wearing one. However, the difference between the scores collected from the phenol red thread and tear ferning tests, before and after wearing a face mask, was not significant.



Effect of Prophylactic Mitomycin C on Corneal Endothelium Following Transepithelial Photorefractive Keratectomy in Myopic Patients

- Conclusion: The MMC application did not significantly affect corneal endothelial density or number and can be used safely and effectively to prevent corneal haze following T-PRK in myopia.



Evaluation of Clinical Efficacy and Safety of Prolonged Treatment of Vernal and Atopic Keratoconjunctivitis Using Topical Tacrolimus

- Conclusions:
- Two years of treatment with topical tacrolimus ophthalmic suspension is an effective method for inducing and maintaining the stable stages of VKC and AKC.



Acute Calcific Band Keratopathy as an Adverse Effect of Recombinant Human Nerve Growth Factor (Cenergermin): A Multicenter Case Series

- Conclusions:
- We report the rapid onset of a corneal opacity after initiation of treatment with cenergermin in patients with stage 2 or 3 NK, consistent with acute calcific band keratopathy. This visually significant adverse finding has not previously been described. We could not identify any risk factors for development. We recommend close monitoring of patients receiving cenergermin therapy because the opacity may be irreversible and may require keratoplasty for visual rehabilitation.



Late Onset Interface Calcium Deposition After Laser In Situ Keratomileusis

- Conclusions:
- Intrastromal calcium deposition can occur after LASIK surgery, with the deposits resembling dystrophic deposits located in the LASIK flap interface in individuals with granular corneal dystrophy type 2. Because the etiology and management of calcific and dystrophic interface deposition after LASIK are distinct, it is important for clinicians to differentiate the 2 entities based on the examination, diagnostic imaging, and, if necessary, molecular genetic analysis.



Long-Term Outcomes of Phototherapeutic Keratectomy for Bullous Keratopathy

- Conclusions:
- PTK is effective in providing long-term symptom relief from bullous keratopathy in most of the treated patients.



Effect of Previous Crosslinking on Intraoperative and Postoperative Outcomes and Complication Rates of Big-Bubble Deep Anterior Lamellar Keratoplasty for Keratoconus Study

- Conclusions:
- Our results have shown that previous CXL treatment does not influence the success of bubble formation and does not increase intraoperative or postoperative complication rates of DALK surgery for keratoconus. The improvement in visual acuity and refractive errors and endothelial cell loss rates were similar between CXL treated and untreated eyes after 2 years of follow-up.



Bilateral Increase of Matrix Metalloproteinase-9 Expression in Tears After the Unilateral Decrease of Corneal Sensitivity

- Conclusions:
- Patients with the unilateral neurotrophic keratitis demonstrated a significant bilateral increase of the MMP-9 expression in the tear film as compared with controls. Despite the tearing reflex and corneal surface barrier being preserved in the unaffected contralateral eyes, it is necessary to pay attention to the possible attenuation of meibomian gland function in the opposite eyes as well.



Efficacy of Topical Ivermectin 1% in the Treatment of Demodex Blepharitis

- Conclusions:
- In patients with Demodex blepharitis, the use of topical ivermectin 1% cream for 15 minutes once weekly in addition to eyelid hygiene had more significantly improved symptoms, ocular surface staining, eyelid debris, redness/swelling, and telangiectasia as compared with eyelid hygiene alone. These findings support the efficacy of topical ivermectin 1% cream application in the treatment of Demodex blepharitis.



Corneal Endothelial Cell Loss After Endocapsular and Supracapsular Phacoemulsification: The PERCEPOLIS Randomized Clinical Trial

- Conclusions:
- The subluxation technique was noninferior to divide-and-conquer regarding postoperative ECL, at least in the first 3 months, and associated with reduced intervention time. Subluxation techniques may be suitable alternatives to endocapsular techniques.



High-Dose Oral Posaconazole for the Treatment of Recalcitrant Fungal Keratitis

- Conclusions:
- In cases of recalcitrant FK failing to respond to conventional therapies, high-dose posaconazole, in the delayed-release tablet formulation, can be an effective treatment option.



Cytokeratin 13 Is a New Biomarker for the Diagnosis of Limbal Stem Cell Deficiency

- Conclusions:
- Identification of K13 + cells on IC specimens provides a simple and reliable method to detect conjunctival epithelial cells on the cornea. K13 is a marker for diagnosing LSCD and localizing the involved area in sectoral LSCD.



Corneal Perforation in Patients Under Treatment With Dupilumab for Atopic Dermatitis

- Conclusions:
- Although there have been previous reports of conjunctival injection and dry eye after dupilumab, these are the first 2 reports of corneal ulceration with rapid progression to perforation in patients under treatment with dupilumab. The underlying pathophysiology for ulcerative keratitis in these cases remains unknown, but there is no doubt that cessation of dupilumab prevented progression of the melting. Severe ocular symptoms while on dupilumab require a prompt discussion with the dermatology team to potentially switch treatment and halt further keratitis progression.



Cool Crosslinking: Riboflavin at 4°C for Pain Management After Crosslinking for Keratoconus Patients, A Randomized Clinical Trial

- Conclusions:
- This study demonstrated that pain and associated symptoms decreased significantly in the riboflavin 4°C group.



Diagnostic Criteria for Terrien Marginal Degeneration: Nordic Terrien Degeneration Study

- Conclusions:
- TMD is defined by peripheral corneal thinning, superficial neovascularization, lipid deposition at the leading edge, absence of ulceration and inflammation, and frequently cavitation. The most sensitive way to follow its progression is anterior segment optical coherence tomography.



Corneal Crosslinking to Regress Pathologic Corneal Neovascularization Before High-Risk Keratoplasty

- Conclusions:
- CXL is able to reduce pathological corneal neovascularization and might therefore be a novel treatment option to improve graft survival after high-risk PK.



Long-term Outcomes of Punctal Cauterization in the Management of Ocular Surface Diseases

- Conclusions:
- Punctal cauterization is an effective modality in treating severe ocular surface diseases in patients who repeatedly lose punctal plugs, and it can be easily performed in a clinic setting without major complications. However, cauterization may need to be repeated in up to a quarter of cases because of recanalization.



Ethylene diamine tetraacetic Acid Chelation in Herpes Zoster Ophthalmicus Is Associated With a High Rate of Corneal Melt and Perforation

- Conclusions:
- Band keratopathy is an uncommon complication of HZO. Treatment with EDTA chelation might be associated with a significant risk for severe complications in these eyes and should be approached with caution.

