

required repeated tissue debridement with amniotic membrane grafting to preserve the eye integrity.

Conclusions The severity of our observation was associated with a co-existing immunocompromised state and appeared similar to findings associated with other orthopoxviruses. Ophthalmic manifestations could be the initial presentation of human monkeypox and could also be severe. Early recognition and intervention may limit the likelihood of substantial ocular morbidity.

P-13 TOPICAL INSULIN EYE DROPS IN INFECTIVE KERATITIS

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Introduction Topical insulin eye drops have been shown to promote corneal epithelium healing in case of persistent epithelial defect (ED), especially in neurotrophic cases. The use of insulin eye drops in other infectious keratitis is limited in the literature. The aim was to evaluate whether insulin eye drops may be useful in case of ED in infective keratitis.

Methods 5 patients with culture proven infective keratitis and ED were recruited. The infections were: HSV-1 (n=1), *Pseudomonas aeruginosa* (n=2), *Acanthamoeba* (n=1) and *Stenotrophomonas maltophilia* (n=1). Each patient was commenced on daily topical insulin at a concentration of 1 units/ml (Humulin S in lubricant eye drops), 1 drop four times a day for 30 days. Evaluation of the ED was performed at slit-lamp, measuring the horizontal and vertical margins of the ED, at baseline, and week 1,2,3 and 4. Resolved ED was defined as no fluorescein staining present at follow-up.

Results Complete healing of the ED occurred only in the case of previous HSV-1 keratitis. The patient was noted to not be using any other topical treatments other than insulin eye drops. In the other 4 cases, the ED was still present at week 4, albeit reduced to 80% of the original size. We observed that in these 4 cases, the patients were still using topical steroids and/or topical antibiotics and/or topical polyhexanide.

Conclusion Insulin eye drops may be helpful in cases of post-infective keratitis ED and non-concomitant use of any other drops, which may interfere or cause epithelial toxicity.

P-14 FACTORS ASSOCIATED WITH THE DISPARITY BETWEEN MANIFEST REFRACTIVE CYLINDER AND KERATOMETRIC ASTIGMATISM IN KERATOCONIC EYES

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Objective To investigate the factors associated with the disparity between manifest refractive cylinder (MRC) and

keratometric astigmatism (KA) in keratoconic eyes to refine the refractive outcomes of toric intraocular lenses in keratoconic cataract surgery.

Methods A retrospective study at Southend University Hospital assessing 145 keratoconic eyes from 75 patients (57 male, 18 female, mean age 27±8.6 years), and comatic aberration of >0.3 µm (defined with Pentacam HR (Oculus, Germany) at a diameter of 6 mm). MRC power was correlated to corneal tomographic variables including higher order aberrations measured using univariate and multivariate regression analysis. Vector difference between KA and MRC was also explored, to detect tomographic variables associated with this disparity. Axis of MRC was compared and correlated to the axis of corneal coma.

Results Both KA and coma showed a significant correlation with the MRC power. The vector difference between KA and MRC is correlated to the KA, posterior keratometric astigmatism and comatic aberration. MRC axis had significant correlation to the axis of coma, with an inverse relationship between MRC axis and coma axis.

Conclusion Corneal comatic aberration is a significant determinant factor of manifest refractive cylinder power and axis and is correlated with the disparity between manifest and keratometric astigmatism found in keratoconic eyes. The effect of higher order aberrations, particularly vertical coma should be considered when planning intraocular procedures for visual rehabilitation.

P-15 DESCemet's MEMBRANE ENDOTHELIAL KERATOPLASTY WITHOUT PERIPHERAL IRIDOTOMY: OUTCOMES AND SAFETY PROFILE (CATEGORY: RESEARCH)

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Objective Pupil block with raised intraocular pressure (IOP) is a serious complication of Descemet's membrane endothelial keratoplasty (DMEK). To reduce the risk of pupil block, many surgeons perform a peripheral iridotomy (PI) before or during the procedure, which itself carries a risk of complications. This study demonstrates the outcomes of a method which does not require a PI.

Methods Retrospective, single centre study of DMEK performed under two surgeons. A PI is not made either before or during the surgery as part of their standard technique. Gas is released post-procedure as required in order to avoid iatrogenic pupil block.

Results Fifty-seven consecutive cases of DMEK between January 2018 to August 2021 were included. Fourteen of these cases were combined with phacoemulsification. There were no cases of raised IOP secondary to pupil block in the postoperative period. Three cases of raised IOP were attributable to a history of glaucoma and steroid response. At one year, there was a mean improvement in best-corrected visual acuity (BCVA) of LogMAR 0.44, from a baseline of LogMAR 0.66. The rebubbling rate was 30%, including partial and complete detachments. There was one case of primary graft failure.

Conclusion DMEK without a PI is a safe and effective alternative technique when combined with gas bubble management in the immediate postoperative period. Avoiding the need for