maps were graded according to the evidence of tomographic patterns predictive of FECD decompensation (loss of parallel isopachs, displacement of the thinnest point, and focal posterior depression) by two blind cornea specialists.

Results The loss of parallel isopachs was significantly less frequently evident in Pentacam pachymetry maps (4%, 95% CI [1%,15%]) compared with both the Casia (31%, 95% CI [19%, 45%], p=0.01) and Precisio (24%, 95% CI [14%, 39%], p=0.04). The displacement of the thinnest point was graded as most evident in a significantly higher proportion of Precisio pachymetry maps (42%, 95% CI [28%, 57%]) compared to the Pentacam (11%, 95% CI [5%, 24%], p=0.005). There were no significant differences in the identification of focal posterior depression on posterior elevation maps across the three devices.

Conclusions The identification of patterns predictive of FECD prognosis on pachymetry and posterior elevation maps are possible with different devices. Significant differences exist among devices in their ability to identify specific patterns.

P-13 STEROID RESPONSE IN DESCEMET'S MEMBRANE ENDOTHELIAL KERATOPLASTY (DMEK): A 7-YEAR LONGITUDINAL STUDY OF 993 NON-GLAUCOMATOUS EYES

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Objective To identify the incidence and risk factors for steroid response (SR) in low-risk patients who underwent routine DMEK or phaco-DMEK surgery.

Methods Retrospective review of 1,032 eyes which underwent DMEK surgery or combined phacoemulsification/DMEK surgery (phaco-DMEK) between 01/2014 and 12/2020 was performed and 993 eyes were included. Eyes with pre-existing ocular hypertension, glaucoma or post-operative pupillary block were excluded. Incidence and time to SR onset were determined. Association between onset of SR and agents for graft tamponade (air vs SF6), topical steroids agents and need for re-bubbling were analysed. Treatment outcomes of SR were reported.

Results Overall incidence of SR was 10.8% (107/993) across 7-years, of which 6.8% (67/993) for DMEK alone and 4.0% (40/993) for phaco-DMEK but the difference was not significant (p>0.05). Majority developed within 4–6 months (30.8%), and median time to onset was 4.5 months post-operatively. 95% were still on topical dexamethasone at onset. Re-bubbling increased the risk (OR 1.85, 95% CI 0.07–1.65). There was no statistical difference between air vs SF6 tamponade and risk of SR (p>0.05). Majority (85.0%) responded well to topical intraocular pressure treatment and change of topical steroid formulation without developing glaucoma.

Conclusion Incidence of SR is higher than expected even for low-risk DMEK patients with no pre-existing history of ocular hypertension but majority of these cases responded well to topical treatment. Lower potency steroid formulation should be considered at around 6-months post-operatively in low-risk DMEK grafts. Patients who require DMEK re-bubbling should be monitored more closely for SR.

P-14 APPARENT ABSENCE OF A SURGICAL PLANE DURING ATTEMPTED STROMAL PEELING FOR DALK IN A POST-ROTATIONAL AUTOKERATOPLASTY EYE SUGGESTS ROLE OF MIGRATION OF HOST KERATOCYTES IN THE DEVELOPMENT OF THE NATURAL PRE-DESCEMETIC PLANE OF SEPARATION

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Case A 58-year-old female was referred to our clinic for corneal scarring in the left eye. She previously underwent ipsilateral rotational autokeratoplasty (IRA) for herpetic keratitis in 2001. Day to day visual acuity was 0.74 logMAR and best corrected visual acuity was 0.40 logMAR. Slit lamp exam showed significant stromal scarring in the visual axis. The peripheral cornea was otherwise clear. Deep anterior lamellar keratoplasty (DALK) using the stromal peeling technique described by Bovone et al was attempted. The donor was prepared with a microkeratome (Moria SA, Antony, France) with a 400 µm head. A 9.0 mm adjustable depth vacuum trephine (Moria SA, Antony, France) was applied to the cornea to a depth of 450 microns. After repeated attempts to open a pre-descemetic plane with no success, the surgery was electively converted to a 2-piece microkeratome-assisted mushroom keratoplasty with 9 mm anterior lamella secured with 16 interrupted 10–0 nylon sutures and a 6 mm posterior lamella. At 6 months postoperatively, the graft was clear. Unaided visual acuity was 0.50logMAR improving to 0.10logMAR with correction. Topographic astigmatism with sutures in situ was 5.4D. The postoperative course was otherwise uneventful. The apparent absence of a pre-descemetic plane in an old IRA adds evidence that formation of this plane is dependent on the allogeneic stimulation of host keratocytes. Our working theory is that host keratocytes migrate to the pre-descemet layer of an allogeneic PK graft, thereby allowing stromal peeling in post-PK eyes along a natural pre-descemetic plane of separation.

P-14 SURGICAL MANAGEMENT OF TRAUMATIC ANIRIDIA USING SCLERAL FIXATION OF ARTIFICIAL IRIS IMPLANT WITH PRE-EXISTING SCLERAL FIXATED IOL

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Introduction A 78-year-old male patient with a background of angle-closure glaucoma underwent left cataract surgery in May 2021, during which zonular dehiscence and vitreous prolapse were noted. This required an anterior vitrectomy and insertion of a GORE-TEX®-sutured IOL (Akreos Adapt AO, Bausch & Lomb). In August 2021 trauma to the same eye resulted in complete aniridia and a vitreous haemorrhage which resolved with conservative management. Complete aniridia reduced the patient's vision to 6/30, and caused constant glare symptoms.