

Discussion Tectonic mini-DSEK with an overlay stromal cap is a novel procedure for corneal perforations which may be used as an alternative to anterior surgical approaches like penetrating or lamellar keratoplasty- reducing astigmatism and the risk of immunological rejection. The tri-lamellar technique adds tissue in areas of thinning and provides early visual rehabilitation.

P-18 DMEK IN ICE SYNDROME AND KERATOCONUS

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Case A 60-year-old male presented with gradual, painless deterioration of vision in his left eye over four years. His past ophthalmic history was clear with no record of trauma, surgery, infection or inflammation. His left eye's best corrected visual acuity (BCVA) was 1.1 LogMar, and the cornea showed stromal oedema and a central thickness of 765 microns. There was no evidence of ocular inflammation or corneal scar in the affected eye, and the fellow eye looked pristine. Hypertonic saline and empiric systemic aciclovir were started, which made no significant improvement. However, an area of raised, mildly pigmented iris with iridocorneal contact was noticed in the far-periphery of the inferotemporal cornea. Oncology consultation excluded uveal malignancies. With the probable diagnosis of ICE syndrome, combined cataract surgery and 7.5 mm endothelial keratoplasty (DMEK) was performed with an aqueous tap to exclude HSV/VZV/CMV endotheliitis. The aqueous tap result was negative for any viral infection, and the Descemet membrane histology confirmed the diagnosis of ICE syndrome. Two months post-op, the patient was happy with the BCVA of 0.54 LogMar. The cornea looked clear with no scar or residual oedema, the IOP was within normal limits, the disc OCT was normal, and the macular OCT showed minimal epiretinal membrane with no traction, which did not justify his vision. Corneal Pentacam showed the rare association of keratoconus with ICE syndrome in his left eye. 10 months post-op, the graft looks clear, and he is happy with his vision and not keen on a rigid contact lens trial.

P-19 CORNEAL ASTIGMATIC OUTCOMES AFTER FEMTOSECOND LASER-ASSISTED CATARACT SURGERY COMBINED WITH SURFACE PENETRATING ARCUATE KERATOTOMIES

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Objective To evaluate corneal astigmatic outcomes of femtosecond laser-assisted arcuate keratotomies (FAKs) combined with femtosecond laser-assisted cataract surgery (FLACS) over 12-month follow-up.

Methods One hundred forty-five patients with bilateral cataracts and no ocular co-morbidities were recruited to a single-centre, single-masked, prospective randomised controlled trial (RCT) comparing two monofocal hydrophobic acrylic intraocular lenses. Eyes with corneal astigmatism (CA) of >0.8 dioptres (D) received unpaired, unopened, surface penetrating FAKs at the time of FLACS. Visual acuity, subjective refraction and Scheimpflug tomography were recorded at 1, 6, and 12 months. Alpins vectorial analyses were performed.

Results Fifty-one patients (61 eyes), mean age 68.2±9.6 years [standard deviation (SD)], received FAKs. Sixty eyes were available for analysis, except at 12 months when 59 attended. There were no complications due to FAKs. Mean pre-operative CA was 1.13±0.20 D. There was a reduction of astigmatism at all post-operative visits (residual CA 1 month: 0.85±0.42 D, p<0.001; 6 months: 0.86±0.35 D, p<0.001; and 12 months: 0.90±0.39, p<0.001). Alpins indices remained stable over 12 months. Overall, the cohort was under-corrected at all time points. At 12 months, 61% of eyes were within ±15 degrees of pre-operative astigmatic meridian.

Conclusion Unpaired unopened penetrating FAKs combined with on-axis phacoemulsification are safe but minimally effective. CA is largely under-corrected in this cohort using an existing unmodified nomogram. The effect of arcuate keratotomies on CA remained stable over 12 months.