WHY IS THE CORNEA OFTEN MUCH THINNER THAN EXPECTED AFTER DMEK? A RETROSPECTIVE REVIEW AND DISCUSSION OF THE CLINICAL IMPLICATIONS

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Introduction DMEK is effective in surgically treating endothelial dysfunction, with visual improvement following oedema resolution. It has been our observation that postoperative DMEK corneas are often much thinner than anticipated. We wished to review our recent cases and discuss potential explanations and implications.

Methods Retrospective case-note review of 50 consecutive DMEK patients, including demographics and serial ultrasound central corneal thickness (CCT) measurements.

Results 63 eyes (33 combined phaco/DMEK; 30 DMEK alone) from 50 patients were identified (29 male, 21 female; median age 75 (34–87)), 87.3% (55/63) had Fuchs’ endothelial corneal dystrophy. Mean preoperative CCT was 680 μm (median 663 μm, range 582–934 μm), significantly reduced at 3 months postoperatively by 23.4% (520 μm; median 522 μm; 404–611 μm) and maintained by 6 months (22.6% reduction). Mean CCT was significantly lower than expected (523 μm vs 540 μm; p<0.001 (one sided t-test)), with 61.9% under 540 μm and 31.7% less than 500 μm. No association was found between 3-month CCT and donor endothelial cell count (median 2600 cells/mm² (2200–3600); p=0.29), or median donor age (71 years (49–88); p=0.22). 15.9% (10/63) of eyes required topical ocular hypotensives at 6 months.

Conclusion Approximately one-third of our cases resulted in sub-500 μm corneal thickness following DMEK. This phenomenon is not explainable solely due to a normalisation of anatomy (new functioning Descemet’s membrane/endothelial pump, corneal dehydration and epithelial re-modelling), but likely related to stromal atrophy and keratocyte death. While further research is required to confirm these findings, this awareness has clinical implications for IOP measurements and subsequent glaucoma management in DMEK patients.

P-11 DMEK IN CASES WITH APHAKIA & ANIRIDIA. THREE-YEAR EXPERIENCE WITH THE SAFETY NET TECHNIQUE

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Objective To present the results of an innovative DMEK technique for bullous keratopathy in cases with aphakia & aniridia, traditionally considered suitable only for DSAEK.

Method Review of 11 consecutive cases affected with aphakia & aniridia who received DMEK using the safety net technique over the last three years. Patients were followed between 6 to 30 months.

Results Graft unfolding over the prolene net was found undermining and was successfully achieved in all cases. Visual acuity improved in 10 cases (91%). Nine cases (82%) had clear cornea and well-functioning DMEK at the end of the study. In one case the surgery was not completed due to choroidal haemorrhage and in one case the graft failed after one year following rejection and repeat PK was performed. One case required re-do DMEK due to early failure. Re-bubbling was required for 4 cases (36%) and there were no cases with posterior graft dislocation.

Conclusions The safety net DMEK technique is a simple, low-cost method for DMEK in eyes with aphakia & aniridia. Increased re-bubbling rate is expected in the aphakic unicameral eyes.

P-12 NECROTISING BLEPHAROCONJUNCTIVITIS AND KERATITIS IN HUMAN MONKEYPOX

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Importance Ophthalmic manifestations occur in less than 5% of cases in human monkeypox, most commonly presenting with self-limiting conjunctivitis and keratitis. We herein present a case of severe ophthalmic complication.

Objective To present a case of human monkeypox with sight threatening necrotising blepharoconjunctivitis.

Method This is a report of a patient who developed necrotising conjunctivitis due to monkeypox at a large University hospital.

Main Outcome and Measures Description of the progression and clinical evaluation of the ocular condition and the management.

Results A 63-year-old male HIV positive presented initially with conjunctivitis and eyelid swelling and developed skin lesions from monkeypox virus two days later. Despite remaining stable systemically, after four days his ophthalmic condition evolves to necrotising blepharoconjunctivitis for which systemic antiviral treatment with tecovirimat was given along with topical trifluridine 1% eye drops. In addition, he