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DISLOCATED DMEK GRAFT

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Introduction:

There are few published reports on DSAEK or DMEK grafts posterior dislocation in vitrectomised eyes. A rare complication of corneal graft procedure. In this report, we describe a case of intraoperative posterior DMEK graft dislocation in a pseudophakic patient(one piece IOL in the bag). A scenario not previously described in the literature.

Materials and methods:

Retrospective case review

Results:

A 64 year old gentleman following multiple retinal detachment surgeries (scleral buckle,silicon oil, 360 laser) and rendered pseudophakic (Yag Cap)after oil removal developed bullous keratopathy several years later with CF vision.DMEK was chosen as the procedure of choice for visual rehabilitation. Intraoperatively, the view was suboptimal due to stomal scarring and epithelial oedema.Unfolding manoeuvres aided with vision blue proved to be challenging with posterior dislocation of the graft after air insufflation to bed the graft. B mode ultrasound with A scan overlay (video) confirmed posterior localisation of the graft on the macula.A plan semi-elective combined procedure (a week later- DMEK being less PVR inducing as opposed to DSAEK as per histologic analysis) with full thickness corneal trephine followed by a temporary keratoplasty was attempted to retrieve the graft via standard 23G pars plans vitrectomy approach. Penetrating Keratoplasty was performed following graft retrieval via the pars plans access port. Pulsed steroid therapy(intravenous followed by oral taper) was needed postoperatively to control intraocular inflammation. The graft remaining clear at recent follow up with no progressive retinal pathology (PVR,CMO).

Conclusions:

The anterior chamber environment created by previously vitrectomised eyes with unstable lens-iris diaphragm (Aphasia, PI, Yag Cap) makes unfolding manoevres needed for posterior lamellar keratoplasty challenging in eyes with compromised transcorneal view. If posterior graft dislocation is suspected, identification of the fact using B mode ultrasound is key before committing to a posterior segment procedure. The timing of the combined procedure will depend on the graft origin(DMEK versus DSAEK) and whether recycling the same tissue is possible as demonstrated in previous reports. PK with temporary keratoplasty following graft retrieval from the posterior segment offers a stable environment to rehabilitate the eye.Careful postoperative monitoring is needed as severe intraocular inflammation will need steroid cover to aid graft survival and surgical success.

Sources:

- Vasquez-Perez et al ,Cornea Volume 38, Number 2, February 2019
-Helaiwa et al,Case Rep Ophthalmol 2018;9:381–387