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Therapeutic PKP for treatment of perforated corneal ulcer

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Background: Corneal perforations after corneal ulcers are ocular emergencies with myriad causes, such as trauma, infection, autoimmune diseases and loss of corneal innervation. Knowledge of the cause of the perforation is essential for its proper management. Treating perforated corneal ulcer with a therapeutic PKP (Penetrating Keratoplasty) is the best option to eliminate active infection or to treat a perforation larger than 2 mm that involves tissue loss.

Materials & Methods: Female patient 56 years old came presenting with corneal melting and perforation after long history of corneal abscess with multiple failure of healing. Patient came seeking medical advice in February 2018 in Eye Subspecialty Center, Cairo, Egypt. She has IDDM (Insulin-Dependent Diabetes Mellitus) for 10 years and no past ophthalmic surgeries. Vision was HM BP Hand Moment Blood Pressure. Slit lamp exam showed faint descemetocele with impending perforation. Surgical Procedure: (1) Under general anesthesia, sterilization of the eye lids was done and surrounding skin using povidone iodine 10%. (2) Centration of the pupil was done using specific surgical marker and then using corneal marker for the stitches was applied. (3) Opening a side port using a 1.2 mm MVR and injecting viscoelastic material to allow formation of the anterior chamber. (4) Trephining the host cornea was done using a 7.75 mm trephine and the donor graft was cut using 7.5 mm punch. (4) Trimming the edges of the host tissue with application of the donor graft and suturing using 10/0 nylon 16 stitches. Postoperative Assessment: Patient was prescribed topical and systemic antibiotics, topical and systemic steroids, topical antiglaucomatous drops and systemic analgesics. Post-operative visits were done one day, one week, 3 weeks. Patient showed improvement in graft edema with regressed signs of inflammation and rejections. Patient subsequently development complicated cataract that was scheduled for removal 6 months post-operatively.

Results: Patient received a therapeutic corneal graft maintaining the integrity of the eye, preserving the anatomy of the globe and eliminating the source of infected tissue.

Conclusion: Therapeutic penetrating keratoplasty is one of the vision preserving measures in cases of large perforated corneal ulcers not responding to other treatment options.

Biography

Wessam N Salem has graduated as ophthalmologist from the School of Medicine, Cairo University, Egypt. He has started his specialized medical career as an Ophthalmology Resident in Cairo University, in addition to his experience at the military hospitals. He has participated in several medical exchange programs abroad including Austria, Hungary and Germany. He has obtained his Master in Ophthalmology from Cairo University, Egypt. Besides being an Assistant Lecturer of Ophthalmology, School of Medicine, New Giza University, he works as a Refractive Surgeon in Dar El Oyoun Hospital and Eye Subspecialty Center, Cairo, Egypt. Presently he is working on his Fellowship in the Royal College of Surgeons of Edinburgh, after being a Member of the International Council of Ophthalmology and the Royal College of Surgeons of Edinburgh.

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