Ocular Surface–Oriented Management of Persistent Epithelial Defect After Penetrating Keratoplasty in Stevens–Johnson Syndrome

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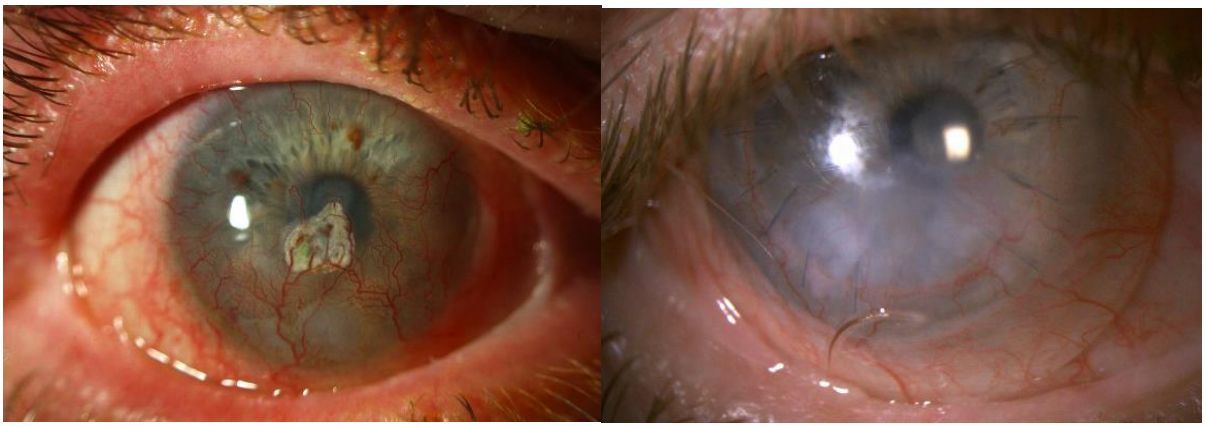
Aim: To describe the role of intensive ocular surface–oriented management in achieving epithelial healing after penetrating keratoplasty (PK) in a patient with Stevens–Johnson syndrome (SJS) and chronic cicatricial ocular surface disease.

Methods: A long-term case of indomethacin-induced SJS, followed since 2001, is presented. The patient developed severe bilateral cicatricial keratoconjunctivitis, recurrent epithelial defects, corneal thinning, and neovascularization despite extensive conservative therapy, including long-term bandage and piggyback contact lens use. Due to progressive visual loss and cataract formation, a combined PK and cataract extraction with intraocular lens implantation was performed in the right eye. Postoperatively, a descemetocele with impending perforation necessitated repeat PK. Following the second PK, a persistent inferior epithelial defect developed, refractory to conventional management including amniotic membrane transplantation and tarsorrhaphy. An intensive ocular surface–stabilizing strategy was initiated, consisting of temporary cessation of topical corticosteroids, hourly autologous serum drops, application of a properly fitted soft contact lens, tarsorrhaphy, and two sessions of botulinum toxin–induced ptosis.

Results: Complete epithelial closure was achieved after the second botulinum toxin injection. Initial epithelial irregularity persisted but showed gradual remodeling after cautious reintroduction of topical corticosteroids. Subsequent visual rehabilitation with a mini-scleral contact lens resulted in a best-corrected visual acuity of 0.8. The ocular surface remained stable without recurrence of epithelial breakdown during follow-up.



Conclusion: In patients with SJS undergoing PK, epithelial healing may represent the primary limiting factor for surgical success. This case highlights that individualized, ocular surface–oriented management—prioritizing epithelial stability over early immunosuppression—can facilitate epithelial closure and functional visual rehabilitation, even in eyes considered for keratoprosthesis.