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## Stromal lenticule transplantation for management of corneal perforations; one year results

Mohammed Samy Abd El Aziz, Adel Galal Zaky and Abdel Rahman El Sebaey Sarhan  
Menoufia University Hospitals, Egypt

**Aim:** To study application of stromal lenticules extracted by femtolaser small incision lenticule extraction (SMILE) as a surgical adjuvant to seal corneal perforations.

**Methods:** Corneal stromal lenticules extracted through SMILE surgery with central thickness 100 µm or more were sutured over corneal perforation sites using 10-0 nylon interrupted stitches with overlying single layer of amniotic membrane. Seven patients had been followed for a minimum of 12 months and were assessed using slit-lamp bio-microscopy, fluorescein stain, tonometry, and best spectacle-corrected visual acuity (BSCVA) measurements. Postoperative complications were recorded all through the follow up period.

**Results:** Corneal perforations had been closed in all seven patients; three patients (42.9%) exhibited improved postoperative BSCVA. During the follow-up period of one year, no signs of re-perforation or infections were detected in any patient.

**Conclusions:** These early findings suggest that the use of corneal stromal lenticules could be an efficient and safe surgical adjuvant for corneal perforation sealing, with possible clinical application, together with amniotic membrane, as relatively simple and low cost temporary measure to prepare perforated corneas for further definitive interventions.

Mohammed.Sami66@med.menofia.edu.eg

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