Fibrin glue-assisted augmented amniotic membrane transplantation for the treatment of large noninfectious corneal perforations.

Authors: Kim H.K., Park H.S.

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Abstract:

PURPOSE: To evaluate and report the efficacy of fibrin glue (FG)-assisted augmented amniotic membrane transplantation (AMT) in patients with large corneal perforations. METHODS: In a retrospective case series, 10 patients with corneal perforations more than 2 mm in diameter were treated with "FG-assisted augmented AMT." A 5- or 7-ply "augmented amniotic membrane" (AM) was constructed by applying FG to each sheet of AM to repair the corneal perforation. The augmented AM was designed 0.5 mm larger than the diameter of the perforation. The augmented AM was transplanted onto the perforation site with 10-0 nylon suture. If needed, additional overlay AM was sutured on top. RESULTS: The mean ulceration diameter was 2.7 +/- 0.95 mm (range, 2-5 mm). All patients retained their own globes after the procedure and had well-formed deep anterior chambers, and 90% of patients showed complete epithelialization over the AM. The mean reepithelialization time was 14.9 +/- 4.9 days (range, 10-24 days). No eyes showed evidence of infection or recurrent corneal melting during the follow-up period. CONCLUSIONS: FG-assisted augmented AMT was easily performed for repairing large corneal perforations. This surgical method was very helpful in stabilizing the wound in the early postoperative period.