

Use of human fibrin glue and amniotic membrane transplant in corneal perforation.

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Abstract:

Purpose. To repair corneal perforation using human fibrin glue (HFG) and amniotic membrane transplant (AMT). **Methods.** Three patients in whom central corneal perforations, approximately 2 mm in diameter, occurred after ocular or systemic disease were successfully cured using HFG and AMT. The technique consists first of using a high-viscosity sodium hyaluronate viscoelastic material to restore anterior chamber depth followed by a debridement of the ulcer. The perforation site is filled with the HFG to corneal surface level. The so-formed plug is then secured with an AMT to avoid its extrusion. An extended-wear bandage contact lens and topical antibiotics were used in these patients for 3 weeks. **Results.** Total reepithelialization was observed after an average of 15 postoperative days. The AMT dissolved within 8 weeks to uncover a whitish scar formed within the perforation sites. No complications were observed in any patients. After a follow-up period of 195-325 days, all corneas remained stable; there was no infection or ulcer recurrence, but some corneal scar thinning was observed in all three cases. **Conclusion.** The described surgical approach using HFG and AMT allowed a successful repair of corneal perforations with a diameter of 2 mm associated with significant loss of stroma. This method may be a good alternative to delay penetrating keratoplasty for treating corneal perforations, especially in acute cases in which graft rejection risk is high.