Intracameral fibrin tissue sealant as an adjunct in tectonic lamellar keratoplasty for large corneal perforations.

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Publication Date: 2009

Abstract:

PURPOSE: To report a technique of intracameral injection of Tisseel fibrin sealant as an adjunct in the performance of tectonic deep anterior lamellar keratoplasty in cases with preexisting or intraoperative macroperforation.

METHODS: Patients with corneal perforations up to 4 mm in greatest dimension first had the defect sealed externally with cyanoacrylate adhesive or fibrin sealant. An air bubble was injected into the anterior chamber (AC), followed by intracameral Tisseel fibrin sealant. This was injected via a 21-G cannula or needle, introduced into the AC from the limbus, with the tip positioned just under the perforation. Fibrin sealant was injected to completely cover the perforation site. Deep anterior lamellar keratoplasty then proceeded with a manual technique without chamber loss. Postoperatively, slit-lamp examination to assess resolution of fibrin sealant and graft status was performed, and visual acuities and intraocular pressures were recorded.

RESULTS: Two patients with preexisting corneal perforations and 1 patient with an intraoperative perforation were included. In all patients, lamellar dissection proceeded uneventfully after intracameral fibrin injection. Fibrin sealant in the AC spontaneously resorbed by the second postoperative week. There were no postoperative intraocular pressure spikes and no cases of severe anterior uveitis. All grafts were clear at last follow-up with no evidence of endothelial decompensation.

CONCLUSIONS: Intracameral fibrin sealant injection seems to be a safe adjunct to allow completion of deep anterior lamellar keratoplasty in cases with corneal perforation with the aim of avoiding higher risk penetrating keratoplasty. Cases were characterized by a lack of complications postoperatively, and no cases of persistent double AC were encountered.