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### ENDOSCOPY-ASSISTED VITRECTOMY AND CONJUNCTIVAL FLAP COVERING IN THE TREATMENT OF SEVERE OCULAR TRAUMA COMBINED WITH CORNEAL BLOOD STAINING

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#### **Introduction:**

To evaluate the effects of severe ocular injury with corneal blood staining treated with a two-step procedure comprising endoscopy-assisted vitrectomy, followed by conjunctival flap covering.

#### **Materials and methods:**

A prospective, non-comparative intentional case series involving 5 severely injured eyes of 5 patients with corneal blood staining was conducted. All patients were diagnosed with additional conditions such as hyphema, vitreous hemorrhage, and retinal detachment. They underwent endoscopy-assisted vitrectomy initially, followed by conjunctival flap covering as required. Besides, silicone oil tampon was applied. Preoperatively, visual acuity was no light perception in 3 eyes and light perception in 2 eyes. The mean preoperative intraocular pressure was 10.6 mm Hg, ranging from 2 to 22 mm Hg. The average interval from injury to vitrectomy was 20.8 days, ranging from 12 to 40 days. The mean follow-up duration was 28.4 months, ranging from 14 to 45 months.

#### **Results:**

The blood staining in the cornea was cleared in all cases, and clear cornea was observed in 2 eyes, corneal edema in 2 eyes, and corneal scar in 1 eye at the last follow-up. Postoperatively, the visual acuity improved to be better than no light perception in all 5 eyes, with the best corrected visual acuity ranging from light perception to 20/33. The postoperative intraocular pressure ranged from 10 to 14 mm Hg, with a mean of 13.2 mm Hg. Retinal attachment with silicone oil tampon was successfully achieved in 100% of all eyes. Additionally, of these cases, silicone oil had been removed in 2 eyes without postoperative retinal detachment by the last visit.

#### **Conclusions:**

The use of endoscopy-assisted vitrectomy and conjunctival flap covering is an effective and safe method to manage severe ocular injuries with corneal blood staining.