

## Abstract 58

### TWO-STEP SURGICAL APPROACH IN A SEVERE PERFORATING EYE INJURY

Oral

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#### **Purpose:**

In a perforating eye injury, it might not be possible to close a very posterior wound. We aim to present and discuss a two-step surgical approach to repair a nail gun-induced perforating open globe injury.

#### **Methods:**

Case-report and surgical video presentation.

A 20-year-old male presented to emergency department after a perforating eye injury using a nail gun. At presentation, visual acuity was light perception, a full hyphema was observed and a large scleral-limbal entry site was identified with choroid and vitreous loss. The CT-scan revealed the location of a 32-mm long nail within the globe until the apex of the orbit. Two surgeries will be presented: i) the primary open globe repair along with, lensectomy, partial vitrectomy and removal of the intraocular and orbital foreign body, and ii) the secondary vitrectomy.

#### **Results:**

The surgical approach consisted in two steps. Firstly, immediate primary globe repair and foreign body removal, along with a lensectomy and partial vitrectomy only. The posterior vitreous was left in situ on purpose to allow for healing of the posterior wound(which would have been impossible to suture). Two weeks after, a secondary vitrectomy was performed - a partial posterior vitreous detachment and less inflamed eye allowed for a much safer surgery. The posterior wound was surrounded by endolaser and eye left fluid-filled. At 6 weeks follow-up, the patient's pinhole visual acuity is 6/24, with a comfortable eye and attached retina.

#### **Conclusions:**

In cases of a perforating eye injury with a very posterior exit wound, a two-step approach – i.e., an initial primary open globe repair and removal of foreign body only, followed by a full vitrectomy 10-14 days after is likely to be a safer and sensible approach.