

Penetrating ocular trauma with a retained fishing hook: A case report

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ABSTRACT

Ocular trauma, a major cause of vision loss, may occur from diverse circumstances and agents. The outcome of ocular trauma is dependent on the cause, severity, and the immediate care given. This case report of a 10-year-old boy with sudden loss of vision following a fishing hook entry into his left eye aims to present a safe surgical technique for fishing hook removal and also highlight the need for early intervention following ocular injuries from a fishing hook.

Keywords: ocular trauma, fish hook, corneal perforation, cut-it-out technique

INTRODUCTION

Ocular trauma is a major cause of vision loss, and the circumstances and agents implicated in such injuries are diverse. Fishing is a popular outdoor activity for people of all ages all around the world, and is seen as a source of income, especially in riverine areas. Fishing is generally considered safe, but is a potential cause of ocular trauma, which could involve the eyelid¹, and/or cornea², or even the retina.³ These injuries can be associated with subsequent traumatic cataract, vitreous hemorrhage and even retinal detachment.¹ In certain circumstances, they can lead to endophthalmitis with partial or complete loss of vision and loss of the eye.¹ Several previous studies have reported good visual prognoses in patients with corneal fishhook injury following prompt and proper treatment.² Treatment of these injuries depends on their location,

involved ocular structures, and the type of hook involved. The objectives of this article are to present a safe surgical technique for fish hook removal and to highlight the need for early intervention following ocular injuries from a fishing hook.

CASE PRESENTATION

A 10-year-old male primary one pupil presented to our facility via the accident & emergency unit with a complaint of sudden loss of vision following a fishing hook entry into his left eye. The incident was said to have occurred about 3 hours before presentation. The patient went fishing with a friend, who inadvertently swung a fishhook backwards into his left eye while standing behind him. On examination, visual acuity was 3/60 in the left eye. There was normal lid anatomy, and the conjunctiva was injected. A rusty fishhook had penetrated the nasal cornea at the 8 o'clock position (Figure 1), engaging the iris inferiorly, and remained in

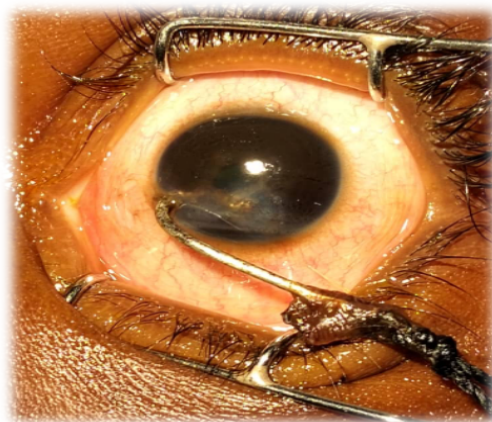


Figure 1: Penetrating ocular trauma with retained fishing hook

the anterior chamber. The anterior chamber was shallow with minimal cells but no hyphema. The pupil was irregular and dilated, while the crystalline lens showed early opacification. Posterior segment examination was deferred. A diagnosis of left penetrating ocular injury with retained intraocular foreign body was made, and an ocular trauma score of 3 was assigned.

Intervention: Preoperative preparation: the patient was immediately placed on parenteral and topical antibiotics, and intramuscular tetanus toxoid vaccine was also administered. He was then prepared for an emergency surgical intervention involving wound exploration, foreign body removal and corneal repair under general anesthesia.

Surgical Procedure: Fishing hook removal was by the 'cut-it-out' technique as follows: A paracentesis was made at 2 o'clock, and the anterior chamber was reformed with viscoelastic. Using a size 15 surgical blade, the entry wound was extended along the axis of the barb of the hook to facilitate its smooth removal (Figure 2). The wound was then sutured with four interrupted 9-0 nylon sutures (Figure

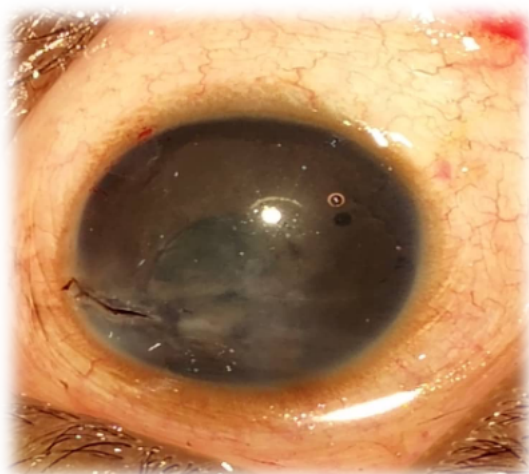


Figure 2: Showing corneal laceration after removal of hook

3), and the side-port was hydrated. Intracameral Ceftazidime and Intravitreal ceftazidime/vancomycin were administered intraoperatively.

Postoperative management: the patient was continued on both parenteral and topical antibiotics, topical steroids and cycloplegic eyedrops postoperatively. On the first postoperative day, visual acuity improved to 6/

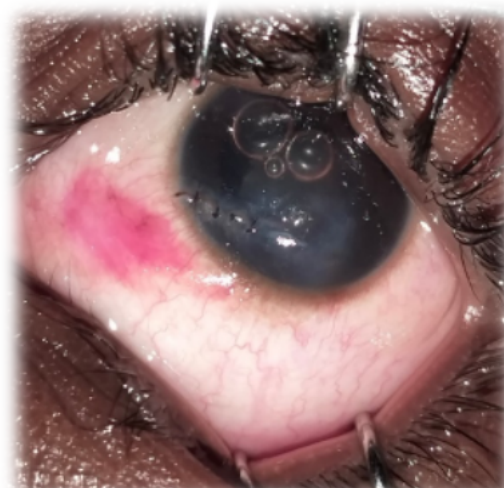


Figure 3: Post-operative photo of the eye after corneal repair

36. Corneal sutures were intact and the anterior chamber was well formed with an air bubble in situ. At his most recent follow-up visit (1 month after injury), the left visual acuity was 6/18. Dilated fundus examination showed mild lens opacification, clear vitreous and attached retina with normal disc and macula. Informed consent was obtained for this case report.

DISCUSSION

Fishhook injury is a rare but potentially devastating ocular injury. The hooks can be deeply embedded, and the barb prevents an easy removal, thereby posing a surgical challenge. Several techniques for the removal of fishhooks embedded in ocular tissues have been reported.³⁻⁶ These include the cut-it-out technique, the advance-and-cut technique, and the back-out technique. The cut-it-out technique, which was described above in our index patient, is used when the fish hook is barbed.^{5,7}

The advance-and-cut technique is the most useful technique in anterior segment fishhook injuries.⁷ The technique involves pushing the hook through a surgical incision to the exterior of the globe, a sterile wire cutter is used to transect the hook beyond the level of the barb, and the barbless hook is then removed via the entry wound.⁷ The back-out technique refers to passing the hook out through the entrance wound. It is primarily useful for barbless hooks.⁷

CONCLUSION

Timely intervention, as well as good knowledge of the uniqueness of fish hook injuries and various surgical techniques, is necessary in the management of fish hook-related ocular trauma. Furthermore, raising awareness and promoting preventive measures such as the use of protective goggles is important in reducing the incidence and severity of such injuries.

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