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Case Report

Electrical Cable as a Missed Intraocular Foreign Body with Orbital Extension: A Case Report

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Abstract:
Background: *Intraocular Foreign Bodies (IOFBs) are one of the common causes of visual loss. Missed IOFBs can lead to devastating complications.*
Case Report: *A 14-year-old boy presented with one-month history of vision loss in the right eye from an electric cable used to whip a cart-horse. He was treated with unspecified eye drops and intravenous antibiotics at peripheral facilities. At a Tertiary hospital, CT scan revealed panophthalmitis and IOFB with orbital extension. He was managed with evisceration and foreign body removal.*
Conclusion*: A high index of suspicion and appropriate investigations help minimize complications in patients with IOFBs.*

Keywords*: Intraocular foreign body, Ocular trauma, Electric cable, Panophthalmitis.*
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Introduction

Ocular trauma is one of the major causes of blindness worldwide. About 16% to 41% of ocular trauma is associated with intraocular foreign bodies (IOFB)(1). The majority of post-traumatic IOFBs are in the posterior segment of the eye(2).An IOFB with orbital extension is a rare occurrence in ocular or cranial trauma. It commonly occurs among young people, and is usually associated with high-velocity trauma forces around the eye (3).

Confirming the presence or absence of a retained IOFB is essential for establishing the management of a patient with ocular trauma. Computed tomography (CT) is generally considered the gold standard method for the evaluation of IOFBs due to its safety. CT is very useful in determining the nature and size of foreign bodies and localizing them as intraocular or intraorbital(4).

Most patients with IOFB require surgical treatment to remove the FB. Enucleation or evisceration is sometimes unavoidable after severe trauma and should be considered in cases with a visual acuity of No Light Perception to prevent sympathetic ophthalmia (5).

We report a rare case of an electric cable that remained undetected for one month and presented as an intraocular foreign body with orbital extension.

Case report

History

A 14-year-old boy from West Arsi presented with complete loss of vision in the right eye one month after use of an electric cable to whip a cart-horse broke and struck the eye. He was immediately taken to the local health center, given tetanus prophylaxis and unspecified eye drops, and sent home. Ten days later he returned with worsening pain and swelling; intravenous antibiotics had been administered for another ten days though there was no improvement. He was finally referred to Menelik II Comprehensive Specialized Hospital.

Examination

On presentation, visual acuity was “No Light Perception” in the affected eye and 20/20 in the left eye. His right eye was found to have severe proptosis, ophthalmoplegia and marked conjunctival chemosis with purulent discharge. Slit lamp examination revealed inferonasal corneal ulcer, small hypopyon and irregular,

non-reactive, dilated pupil. The lens was cataractous, and the posterior segment was not accessible (Fig. 1). Examination of the left eye was unremarkable.

Fig. 1: Photo at presentation showing severe proptosis and chemosis

Investigation

CT scan of the orbit showed a hyperdense material in the right globe, perforating across the posterior sclera and extending into the intraconal space (Fig. 2). Thus, a diagnosis of an intraocular foreign body with orbital extension was made**.**

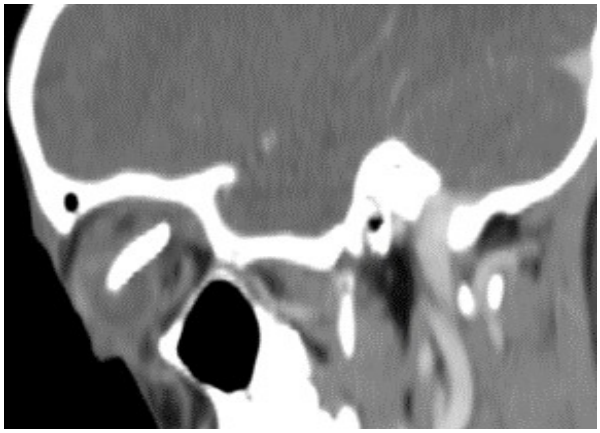

Fig. 2: Sagittal CT-scan of brain and orbit showing hyperdense IOFB perforating the posterior sclera and extending to the orbit

Management and outcome

The patient was admitted with a diagnosis of Panophthalmitis plus intraocular foreign body with a plan for evisceration and removal of the foreign body. Additionally, he was started with triple IV antibiotics (vancomycin, ceftriaxone, and metronidazole). Intraoperatively, the vitreous was found to be filled with pus and an electric cable of 5 cm, (Fig3) was removed.

Fig 3: A 5-cm multistrand electric cable removed during evisceration.

After 48 hours, IV antibiotics were changed to oral (amoxicillin-clavulanate 625 mg every 8hrs), and prednisolone 10 mg PO BID was initiated and continued for seven days postoperatively. The swelling and discomfort in the right eye resolved two days after the surgery.

Discussion

Identifying retained intraocular foreign bodies resulting from trauma can be quite difficult. Patients may be unaware of their injury with an object penetrating the eye, and the initial account of the incident and the mechanism of injury may be ambiguous (6). A thorough examination of the eye and its surrounding structures is essential. This should include an assessment of baseline visual acuity, pupillary response, intraocular pressure, slit-lamp bio-microscopy, clarity of the ocular media, lens condition, and any indications of endophthalmitis or orbital cellulitis (7).

Orbital imaging plays a crucial role in identifying intraocular foreign bodies. Among the various diagnostic techniques for evaluating foreign bodies, computed tomography (CT) is considered the most sensitive method for detection, as it effectively identifies and localizes metallic, glass, and stone foreign bodies. In cases of high-velocity trauma to the orbit or the globe, it is advisable to perform a CT scan of both the brain and paranasal sinuses in conjunction with a CT of the orbit (3,4).

Conclusion

Maintaining a high index of suspicion, conducting thorough examinations, and utilizing suitable diagnostic instruments are crucial for the accurate diagnosis and management of intraocular foreign bodies, ultimately improving the outcome.

Conflicts of Interest

The authors declare that they have no conflict of interest to declare.

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