

Case Report on a Child with a Penetrating Orbital Injury from Wood

Tenmang P.E, Saleh N, Ramyil A.V, Delsat P.D

Department of Ophthalmology, Jos University Teaching Hospital, Jos

Corresponding author: Tenmang P.E. Email: panshak_tenmang@yahoo.com

Background: Penetrating orbital injury is relatively common during civil life. These injuries can be globe sparing or globe involving, they can also be sight or life threatening.¹ Intraorbital foreign bodies may occur after direct trauma. Injuries in wood workers may be responsible for one out of every six orbital injuries.² Wood/stick injuries have been reported to be the common cause of penetrating orbital injury.^{3, 4} Prompt treatment of these injuries is important to prevent loss of vision and other complications that may lead to loss of life.² These injuries are commoner in young men.⁵ This is a case report of a 9-year-old boy who had orbital injury caused by a piece of wood.

Case Report: A 9-year-old boy from Plateau State, North Central Nigeria was seen with a piece of wood in the left orbit. There was pain and bleeding from the eye and subsequent swelling of the lids with difficulty opening the eye (Figure 1). The child was oriented in place and person, the right eye was essentially normal. On the left eye there was bleeding from the site of injury and a piece of hard fixed wood lodged around the left orbit close to the nasolacrimal sac area displacing and hindering visualization of the globe. The lid was swollen and tender however gentle parting of the



Figure 1: Wooden piece imbedded within the left orbit extending into the maxillary sinus.



Figure 2: Left eye immediately after removal of the piece of wood

lid revealed chemosis and the child was able to count fingers at a meter.

The otorhinolaryngologist and anesthesiologist were invited to review the patient. Random blood sugar, hemoglobin level, urea and electrolyte were all normal. The globe was normal on Ocular ultrasound scan.

Patient had intramuscular anti-tetanus serum (1500 IU), intravenous fluid, paracetamol, metronidazole and ceftriaxone given while waiting surgery. An informed consent was obtained for exploration and foreign body removal.

Surgical procedure: With the child under general anesthesia an artery forceps was used to pull out the piece of wood (Figure 2), there was a dead space leading into the maxillary sinus which was irrigated with saline and filled with chloramphenicol ointment. The outer wound was sutured interruptedly using Vicryl 6-0 Suture. The patient was placed on systemic and topical antibiotics, systemic antifungal, analgesics and chymotrypsin all for 5 days and was discharged after 5 days with significant improvement in vision to 6/6 and resolution of the chemosis.

Discussion: Orbital trauma can be blunt or penetrating. Penetrating orbital injuries can be through the skin and bone into the orbit, through the lids and sometimes through the interpalpebral fissure.¹ It has been reported that different materials can penetrate the orbit.⁶ The globe is at risk of damage from penetrating orbital injury and these objects also have the tendency of causing brain injury as they can extend to the cranial cavity.⁶ Pencils have been reported to be the commonest form of wooden intraorbital foreign bodies.⁵ A study done in North western Nigeria showed penetrating orbital injuries to account for 4.2%.⁷

Orbital cellulitis has been reported to occur as a complication in some cases.⁸

Conclusion: Early presentation and treatment of penetrating orbital injuries is crucial in preventing complications.

References

1. Abdu L, Mijinyawa UA Child with penetrating Orbital injury as a result of assault. *ARC J of Ophthalmol.* 2018; 3(2): 8-10.
2. Kusumawardhany R. Wood penetrating orbital injury: A case report. *J Clin Exp Ophthmol* 2018; 9(5):755
3. Monsudi KF, Ayanniyi AA, Olatunji OF, AbdulFattah I. Penetrating ocular injuries in a tertiary health facility. *Am J Med Sci Med.* 2013; 1: 66-68.
4. Ta, S, Top H. Intraorbital wooden foreign body: Clinical analysis of 32 cases, a 10-year experience. *Ulus Travma Acil Cerrahi Derg.* 2014. 20:51-55.
5. Shelsta HN, Bilyk JR, Rubin PA, Penne RB, Carrasco JR. Wooden intraorbital foreign body injuries: clinical characteristics and outcomes of 23 patients. 2010; 26(4):238-244
6. Mehmet A, Metehan E, Burhan OG, Ismail D. Trans-orbital orbito-cranial penetrating injury caused by a metal bar. *J Neurosci Rural Pract.* 2012; 11: 116-118.
7. Rafindadi AL, Pam VA, Chinda D, Mahmud AF. Orbital and ocular trauma at Ahmadu Bello University Hospital Shika-Zaria. Aretrospective review. *ANN Nig Med* 2013; 7:20-23.
8. Balogun BG, Balogun MM, Adekoya BJ. Orbital cellulitis: clinical course and management challenges. The Lagos State University Teaching Hospital experience. *Nig Q J Hosp Med.* 2012; 22(4)231-235.