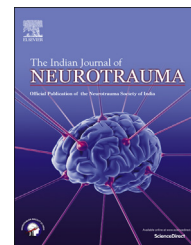


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## Case Report

# Penetrating injury of orbit and skull with wooden stick from a tree: A rare case report



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## ABSTRACT

Penetrating injuries of orbit into the skull are uncommon. Here we present a case of 30 year male, who was working on the tree and had penetrating injury of left orbit into the skull. Penetrating object was found to be wooden stick from the tree.

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## 1. Case report

A 30 year male was admitted in the emergency room with history of penetrating injury of left orbit. Patient is a wood cutter and had climbed a tree to cut a branch of it. On the tree he lost his balance and fell down, during which he had accidental penetrating injury of left orbit. On examination he was fully conscious and neurological examination was normal. Local examination of left orbit showed (Fig. 1) wooden foreign body in medial canthus (Fig. 1), upper eyelid was retracted upwards, conjunctival tear, cornea hazy, improper closure of

eyelids, fundus difficult to visualize. CT scan of orbit (Fig. 2) showed  $35 \times 9.2 \times 7.8$  mm sized elongated foreign body piercing medial wall of orbit and extending into ethmoid sinus (Fig. 3), surrounding air and haemorrhage was seen. Associated fracture of cribriform plate (Fig. 4) and adjacent floor of anterior cranial fossa on left side, tiny bone fragment was displaced intracranially (Fig. 4). Left ocular globe was compressed and displaced laterally, but no obvious intraocular hyperdense haemorrhage was seen. Plain axial CT scan of the brain showed no parenchymal injury (Fig. 4). Foreign body was removed successfully, and turned out to be a wooden stick (Figs. 5 and 6).

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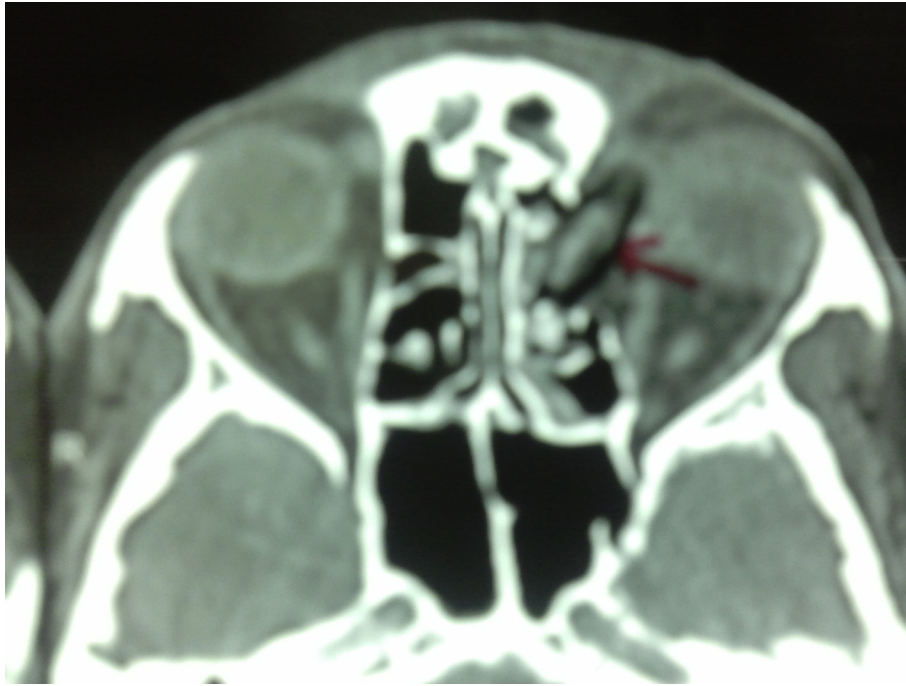
**Fig. 1 – Wooden foreign body at medial canthus.**

## 2. Discussion

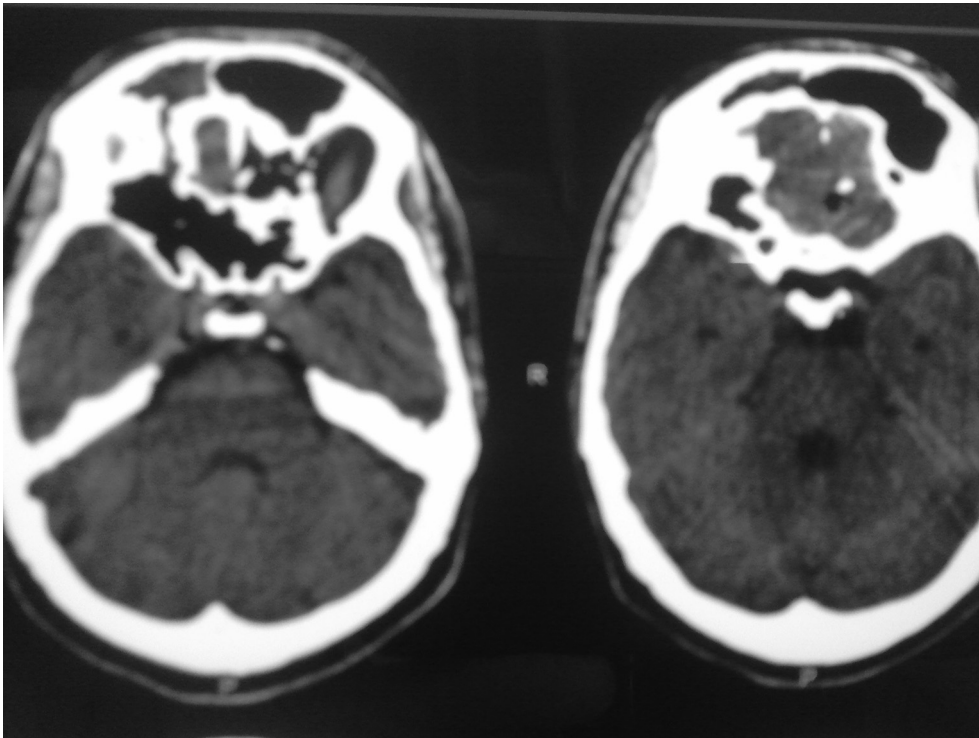
Penetrating eye injuries are not so common, but penetrating injuries from orbit into the skull are extremely rare.<sup>1</sup> This patient had foreign body penetration from left orbit into ethmoid sinus, cribriform plate and anterior skullbase. The walls of the orbit are thin and may be penetrated by objects moving at some velocity directed at right angles to the wall.<sup>2</sup> The roof of the orbit that is made up of the frontal bone and the lesser wing of the sphenoid are very thin and are therefore at particular risk of injury. Orbital radiographs may be negative and are therefore unreliable in ruling out intracranial involvement, and therefore we would recommend that computed tomography should be performed when there is suspicion of secondary transorbital brain injury. Various cases of transorbital craniocerebral injury have been reported in the literature<sup>3</sup> involving door key,<sup>4</sup> nail, pencil, spectacle arm,<sup>2</sup> metal bar, ear pick,<sup>5</sup> bicycle brake handle,<sup>6</sup> plastic chop stick, wooden foreign body, ceramic stone and toilet brush handle.<sup>7</sup> These injuries are usually of a low velocity, localized, traverse a straight course and usually associated with a good clinical outcome.<sup>4</sup> Three dimensional CT scan of the orbit and skull are helpful in better delineation of foreign body and further treatment.<sup>7,8</sup> In the postoperative period it is helpful in identifying residual bone fragments or foreign body, abscess formation as well as new or recurrent haematoma and areas of tissue injury not evident at the time of initial imaging.<sup>1</sup> This case looks unique as patient had penetrating orbital into skull injury due to wooden stick from a tree and probably had not been reported.



**Fig. 2 – Sag CT-FB marked with arrow.**



**Fig. 3 – CT Orbit-FB penetrating ethmoid sinus.**



**Fig. 4 – CT Axial-FB penetrating cribriform plate-anterior cranial fossa.**



Fig. 5 – Intraop picture-wooden stick from orbit.



Fig. 6 – Wooden stick after removal from left eye.

### Conflicts of interest

All authors have none to declare.

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