Abstract:
Penetrating intraorbital injury with wooden foreign body (FB) is not an uncommon ophthalmic emergency. The retention of organic material frequently leads to complications and the irremoval is of paramount importance. We present here a patient who had a penetrating injury of the left orbit with a wooden FB, which believe is the largest to be reported. The patients presentation, investigations, treatment and the followup is reported here with a succinct review of management of organic foreign bodies.

Keyword: penetrating eye injuries, orbital fracture, eye foreign body

INTRODUCTION:
The orbital cavity can host an inert foreign body for a considerable length of time without causing any symptoms, but the retention of organic material especially wood frequently causes orbital infection, abscess, FB granuloma and persistent discharging sinus. Penetrating injury of the orbit with a wooden stick or a branch is not an uncommon finding in ocular emergencies. A portion may have broken off and remained embedded within the soft orbital tissues. Diagnosis of an impacted organic substance is very difficult even with the use of advanced investigative procedures. Vegetative materials must be removed as they serve as a nidus for orbital infection. The removal of foreign body from the orbit, which is crowded with delicate structures, is not safe. Removal of vegetative substances which may fragment easily is more difficult. We present here a rare case of penetrating injury of left orbit with a large wooden FB.

CASE REPORT:
A 50 yrs old male presented with a history of injury to left eye with complaints of pain in right eye. He sustained injury to left eye with wooden stick while he was travelling as a pillion rider in a two wheeler (fig 1). The accident happened at Andhra Pradesh, where he was given first aid and referred to our institution. He reported to our hospital 17 hours after injury.

Fig-1: Wooden FB projecting at the inferior orbital margin of LE & marked inflammation of RE

Fig-2: Slit lamp examination showing inferior subluxation of lens in RE

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On examination the right eye vision was 4/60 NIP, IOP 16mmHg by applanation tonometry with periorbital oedema, mechanical ptosis, conjunctival congestion, irregular anterior chamber depth, dilated pupil which was not reacting to light and Inferior subluxation of the lens (fig2). Examination of fundus revealed normal posterior segment. Left eye showed Visual acuity 6/24 with PH 6/18, IOP14mmHg, wooden stick projecting at the level of infra orbital margin, periorbital oedema and conjunctival congestion, normal anterior chamber depth, 3mm briskly reacting pupil, lens showed early lens changes. Examination of LE fundus showed normal retina. On investigation, plain X-ray orbit PA view showed no radio opaque foreign body in both orbits. CT scan orbit after removal showed hyper density in right extraconal space on lateral aspect encroaching lateral rectus and extending into the intraconal space, fracture lamina Papyracea of ethmoid bone and soft tissue density in ethmoid sinus (fig4). Blood sugar 320mg/100ml. Culture of swab from the intraorbital portion FB showed no growth.

Under local anaesthesia, foreign body removal done, wound was irrigated with Metronidazole and packed with Betadine gauze. The measurement of foreign bodies removed was about 12cm x 1.5cm (fig3). After subtracting the portion of the FB projected outside, it comes around 9.5cm x 1.5cm. Post operatively the patient was treated with broad spectrum antibiotics and anti-inflammatory agents. The measurement of foreign bodies removed was 12 x 2 mm, 9 x 2 mm (fig5). Post op examination showed VA in RE 6/60 with PH 6/24p, LE 6/18 with PH 6/12. In right eye there was mechanical ptosis, restriction of abduction and elevation, inferior subluxation of lens and left anterior segment was normal. Examination of Fundus was normal in both eyes.

We suspected IOFB entrapped in the right orbit within lateral rectus (LR) muscle. After glycemic control, removal of IOFB was planned. Under local anaesthesia, right lateral canthotomy and exploration of LR muscle done. Two pieces of wooden foreign body were removed and lateral canthus was reformed. Postoperatively the patient was treated with broad spectrum antibiotics and anti-inflammatory agents. The measurement of foreign bodies removed was 12 x 2 mm, 9 x 2 mm (fig5). Post op examination showed VA in RE 6/60 with PH 6/24p, LE 6/18 with PH 6/12. In right eye there was mechanical ptosis, restriction of abduction and elevation, inferior subluxation of lens and left anterior segment was normal. Examination of Fundus was normal in both eyes.

An orbital foreign body may lead to variety of signs, symptoms and clinical findings according to its size, location, velocity and composition. The radiolucent nature of wood prevents localisation by routine orbital radiography, but with the aid of CT and ultrasonography, the presence and location of the foreign material can often be detected.