CASE REPORT

SUGARCANE IN THE EYE! – A CASE REPORT
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ABSTRACT: Ocular trauma is one of the leading causes of visual loss. The agents incriminated in ocular injuries are diverse. We present an unusual case of a large orbital foreign body. A 25 years old male reported to our emergency room at 1 am with history of road traffic accident. On examination it was seen that he had an injury to his left eye with retained sugarcane piece in his left orbit. Urgent NCCT brain with orbit was done which showed an intact left globe which was displaced posteriorly. The retained foreign body was surgically removed. A 15cms sugarcane piece, 4cms inside orbit and 11cms outside and of 1.5cm thickness was removed. To our surprise in spite of 4cms intra-orbital foreign body the globe was intact and there was no injury to the rectus muscles. Traumatic injuries are difficult to treat with and generally have poor prognosis but we should not lose hope of salvaging the eye and visual acuity.

KEYWORDS: Penetrating, orbital foreign body, road traffic accident, ocular trauma, NCCT, Sugar cane.

INTRODUCTION: Ocular trauma is one of the leading causes of visual loss. Vision is one of the most valued and powerful senses of human body. Any injury to it is detrimental not only to the afflicted but also to the society in general and in third world countries like India it invariably results in loss of income. An injury is damage to a person or tissue/organ caused by transfer of energy-mechanical, thermal, chemical, electrical or radiant.

The eyeball is a fairly well protected structure in our body. The eye is protected from direct injury by lids, eyelashes and protecting margins of the orbit.

Physiologically, it is protected by blink reflex, head turning reflex and lacrimation which follow intrusion of any irritant material. Despite these protective mechanisms, an injury to the eye or its surrounding tissues is the most common cause for attendance in an emergency room. The extent of trauma may range from simple superficial injuries to devastating penetrating injuries of eyelids, lacrimal system and globe.

Eye injuries are a major cause of disabling ocular morbidity that especially affects the paediatric age group. Globally more than 500,000 blinding injuries occur every year. Approximately 1.6 million people are blind due to ocular trauma, 2.3 million are bilaterally visually impaired and 19 million have unilateral visual loss.

No one starts a day believing that he will sustain trauma, hence the sudden realization that what had been taken for granted is lost and if this injury is resulting in loss of income then this leads the patient and his family to extreme anxiety.

Prompt evaluation and appropriate management of ocular injuries are paramount in preservation of vision. The type of injury, location and extent of penetrating injury, type of lens damage, presence and composition of intraocular foreign body mostly contribute to the final visual outcome in patient suffering from penetrating ocular injury.
CASE REPORT: A 25 years old male presented to our emergency room at 1 am. He gave history of road traffic accident and on examination it was found that he had penetrating injury to left eye with retained piece of sugarcane in orbit. (Fig. 1) Patient was in acute ocular distress. General condition of the patient was fair. His Glasgow coma scale score was 15.

On examination, an intact piece of sugarcane was seen in his left orbit; neither the lower lid nor the eyeball could be seen. There was tense upper lid oedema. Visual acuity measurement was not possible in left eye. Right eye anterior segment examination was within normal limit with visual acuity of 6/6. Patient also had active nasal bleed. Urgent NCCT Brain with orbit with PNS was done to rule out any injury to brain parenchyma, bony orbital wall fractures and paranasal sinus injury/bleed. To our surprise there was no injury to the brain parenchyma, bony orbit or paranasal sinus, the left eye globe was intact and displaced posteriorly.

After primary care to stabilize the general condition of patient and to stop nasal bleed, patient was taken for emergency surgery. We removed a 15cms piece of sugarcane from the left orbit with 4cms part inside the orbit while 11cms outside the orbit which had a proximal thickness of 1.5cm. (Fig. 2) On left eye examination, there was presence of chemosis, corneal edema and a streak of hyphema but the rectus muscles were not injured. Lower eyelid laceration was sutured with 4-0 silk in three layers. (Fig. 3)

Postoperatively, patient improved very well with smooth recovery except for traumatic ptosis of left upper eye lid and mild restriction of extraocular movements, which improved later on.

Visual acuity of patient improved from (FCCF) finger counting close to face to 6/36 within one week. Patient had a refractive error which was corrected and his best corrected visual acuity was 6/9. Patient was kept on intravenous antibiotics, topical antibiotics and topical NSAID’s. On discharge the patient was advised 6 months follow up for traumatic ptosis.
DISCUSSION: Ocular trauma is a major cause of visual impairment and morbidity worldwide. Penetrating ocular trauma is a leading cause of unilateral blindness.[6] According to BETTS (Birmingham eye trauma terminology system) ocular injuries are classified as closed globe and open globe injuries at the time of initial presentation.[4] Ocular injuries can also be anatomically classified into anterior segment, posterior segment, adnexal and orbital trauma.[5]

In our case it was a closed globe injury as per BETTS classification and anatomically it would be classified as an orbital trauma.

Trauma to orbit can be classified as blunt trauma or penetrating trauma. Intra-orbital foreign bodies usually occur after a high velocity injury such as gunshot or industrial accidents; more rarely they occur following trivial trauma.[7] The impacted foreign body causing penetrating orbital trauma may be organic or inert.

In ocular trauma different modes of injuries and different settings of injuries may necessitate change in the approach towards the management of a patient. For example inert materials like glass or plastic are associated with lesser risk of infection while organic foreign bodies like wood, bamboo etc. are associated with high risk of infection and need to be removed at the earliest.

A decision to remove them should be based on factors like type of foreign body, site of impingement, size of foreign body, potential secondary injuries and hemostasis.[8] Woodlock et al from UK found that foreign bodies of greater mass were associated with worse visual outcome. X-rays and computed tomography scan remain the investigations of choice for ocular or orbital trauma.[9]

In our case, patient had a large vegetative intra-orbital foreign body due to road traffic accident which is an unusual presentation. In spite of such a large foreign body the orbital walls were intact and so was the globe which is again a rare presentation. The decision to operate immediately was taken because it was a large vegetative foreign body with extremely high chance of causing infection.

In literature, there are few cases described of rare presentation of intra-orbital foreign body not penetrating eye globe. In our study search we could find three cases of organic intra-orbital foreign body with no ocular involvement[7,10]
CONCLUSION: In traumatic injuries it is the nature of the injury that decides the prognosis; although such types of injuries are difficult to treat and generally have poor prognosis, we should not lose hope of salvaging the eye and visual acuity.

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