



A case report of post traumatic eyeball luxation out of socket

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Article History

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Abstract: - Globe (eyeball) luxation is a rare condition that can occur spontaneously or following trauma. Globe injuries, in general, can be classified into closed globe injuries and open globe injuries. Traumatic luxation occurs following high-velocity direct or indirect trauma, especially to the head and neck region. Trauma appears to be the most common cause of globe luxation, including incidents such as road traffic accidents, various forms of extreme sports, human and animal bites, domestic blunt or penetrating injuries, and self-inflicted injuries. Road traffic accidents seem to be the most frequent cause. Here is a description of anterior globe luxation post trauma in a case of road traffic accident. Patient presented in emergency within 2 hours of injury. With eyeball lying out of socket showing signs of ischemia. Emergency repositioning was carried in OT and eyeball was salvaged.

Keywords: Globe luxation; Ocular trauma; Road traffic accident; Emergency repositioning; Eye ischemia.



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Introduction

Globe (eyeball) luxation is a rare condition that can occur spontaneously or following trauma, characterized by the complete or partial prolapse of the globe from the orbit^(1,2,3). In clinical practice, varying degrees of globe prolapse may be observed, each with different clinical, functional, and structural outcomes. Severe cases may involve avulsion, where there is partial or complete disconnection of the optic nerve and/or extraocular muscles^(1,2,3).

Globe injuries, in general, can be classified into closed globe injuries and open globe injuries. Associated and severe forms of injuries include globe luxations and globe avulsions. Several classifications may be applied to globe luxation.^(1,2,4)

Traumatic luxation occurs following high-velocity direct or indirect trauma, especially to the head and neck region. Trauma appears to be the most common cause of globe luxation, including incidents such as road traffic accidents, various forms of extreme sports, human and animal bites, domestic blunt or penetrating

injuries, and self-inflicted injuries. Road traffic accidents seem to be the most frequent cause.^(4,8,9,10,11)

Here is a description of anterior globe luxation post trauma in a case of road traffic accident. Patient presented in emergency within 2 hours of injury. With eyeball lying out of socket showing signs of ischemia. Emergency repositioning was carried out in OT and eyeball was salvaged.

Case Summary

A 54-year-old male presented to Shalby Hospital with a history of a road traffic accident. The patient experienced an anterior luxation of the globe after his face struck the mirror handle of his vehicle. He presented with immediate vision loss in the left eye and visible prolapse of the globe from the orbit, accompanied by multiple debris on and around the eyeball and a lower lid tear extending to the cheek. Initial management included a saline wash, antibiotic drops, and a CT scan of the orbit and brain.

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Fig 1 shows patients' photo on presentation, luxated eyeball with debris, lower sclera showed blackening and lower lid tear

Report was:

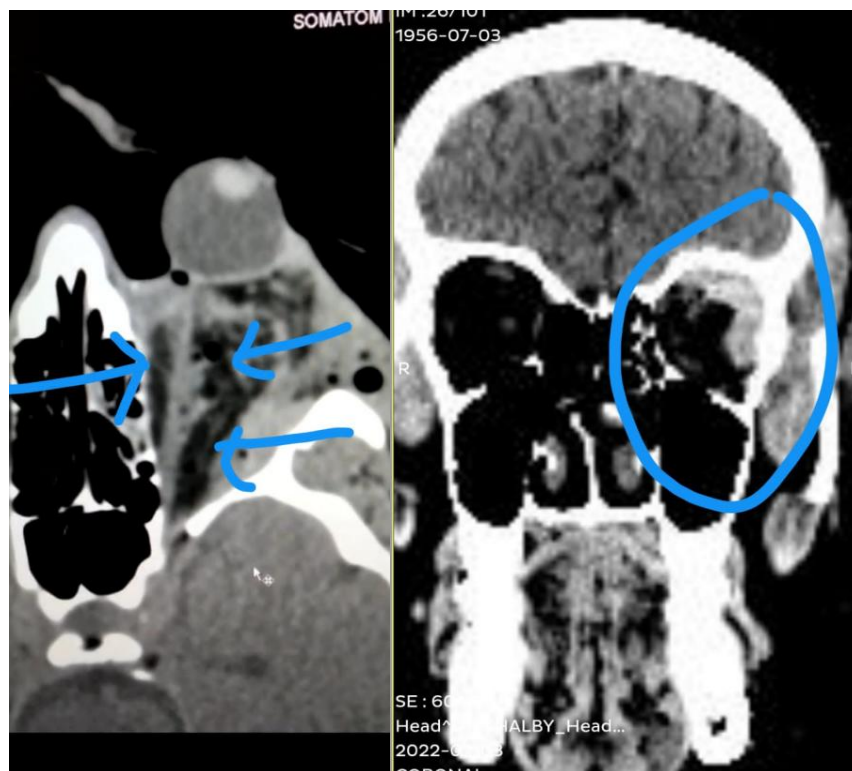


Fig 2 and 3 shows CT scan images suggesting large hematoma behind superior rectus and lateral rectus muscles and eyeball out of socket with stretched out but intact optic nerve.

The CT scan revealed a large hematoma surrounding the superior rectus and lateral rectus muscles, pushing the eyeball anteriorly and stretching the optic nerve. Additionally, a small non displaced fracture of the floor of the orbit was noted. The brain CT was normal, ruling out intracranial injuries.

Given the intact but stretched optic nerve, the decision was made to surgically reposition the globe. The patient underwent general

anesthesia, and meticulous cleaning and debridement of the eyeball were performed. Due to significant swelling of the tissue, lateral canthotomy was necessary to create adequate space for repositioning. After successful repositioning, the lateral canthotomy was closed, and the inferior trauma wounds were sutured. A lateral half tarsorrhaphy was performed, and the eye was patched for 24 hours postoperatively.



Fig 4 and 5 shows intraoperative images of debridement of devitalized tissue and removal of debris.



Fig 6 shows lateral cathotomy and repositioning of eyeball in socket



Fig 7 shows Tarsorrhaphy and lower cheek wound repair



Fig 8 shows healed stitch line and reduced swelling around eyeball



Fig 9 and 10 shows post tarsorrhaphy stitch removal eyeball in situ with some movement

The patient was started on antibiotics and steroids. On the first postoperative day, the eyeball was well-settled in the socket, and the cornea was healing. The tarsorrhaphy was removed after 15 days, and the patient reported some eye movement superiorly and inferiorly. He also experienced some perception of light and expressed satisfaction with the cosmetic outcome at the end of 3 months.

Discussion

The management of globe luxation requires a multidisciplinary approach involving ophthalmologists, plastic surgeons, and radiologists. The primary goals are to reposition the globe, prevent infection, and minimize further damage to ocular structures. In this case, the timely surgical intervention and use of lateral canthotomy were crucial in creating the necessary space for globe repositioning and preventing further optic nerve damage.^(4,5)

The patient's initial loss of vision and subsequent partial recovery of light perception underscore the importance of early and appropriate management. While the prognosis for visual recovery remains guarded, the successful repositioning and stabilization of the globe provide a favorable cosmetic outcome, patient's psychological relief and potential for functional improvement.^(4,5,6)

Conclusions

This case highlights the complexity and urgency of managing traumatic globe luxation. Prompt diagnosis, comprehensive imaging, and skilled surgical intervention are essential to optimize outcomes. Continued follow-up and supportive care are necessary to monitor for potential complications and assess long-term visual

recovery. This case contributes to the limited body of literature on globe luxation and underscores the need for heightened awareness and expertise in managing such rare ocular emergencies.^(5,6,7)

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