

Case Report**Traumatic bilateral globe avulsion (case report)***Hassan Razmjou^a, Marjan Masjedi^{*a}***Abstract**

Avulsion of the globe is a rare event, and there are only a few reports of true total enucleation of the globes in the literature. We report a 20-year-old man who was a victim of car accident, with bilateral enucleation of the globe. This is the third reported case of bilateral subluxated globes that were successfully repositioned in the orbits. Although the patient had no light perception vision, preserving his one eye reduced the psychological stress of sudden traumatic loss of vision for him and his relatives.

KEYWORDS: Globe Avulsion, Traumatic Enucleation.

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Autoenucleation of the globe is an extremely rare condition. We describe a case of bilateral traumatic globe avulsion with midface fractures due to car accident.

Case Report

A 20 year-old male patient was admitted to the emergency room after car accident. On ophthalmology visit, he was conscious (GCS = 14). Severe facial soft tissue injury with Le Fort II maxillofacial fracture was noted. Visual acuities were no light perception OU. Right globe was subluxated anteriorly. All of the extra ocular muscles were detached except superior oblique muscle. The optic nerve was attached to the right globe (Figure 1). There was a scleral rapture near infra temporal limbus about 5mm length. The left globe was absent and extraocular muscles and optic nerve was cut (Figure 2). Orbital CT showed extensive facial and orbital fractures. The brain CT was normal. The scleral rapture of right globe was repaired and the globe was gently reduced in the orbit, and a total tarsorrhaphy was performed. The left orbit was explored and the globe was absent, the remaining conjunctiva

was repaired. Systemic antibiotics and corticosteroids were given postoperatively. Two weeks later the tarsorrhaphy was opened, the right eye had no light perception.

Discussion

Globe avulsion is a rare condition usually resulting from severe trauma to the orbit and face. Morris described 3 mechanisms: (1) propulsion the globe forward after entering an elongated object to the medial orbit; (2) a wedge shaped object enters the orbit medially and displaces the globe anteriorly; and (3) optic nerve direct transection by a penetrating object. Song and Carter described abrupt deceleration as a cause of bilateral globe subluxation.¹ In our case deceleration was the cause of bilateral globe subluxation. We had no explanation to describe why all of the extra ocular muscles were detached from the right globe except superior oblique muscle.

Traumatic globe subluxation had rarely been reported in the literature. Bilateral globe subluxation was reported with complete optic nerve transection resulted from accident.^{2,3}

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Figure 1



Figure 2

Management of luxation of an intact globe is controversial. Some of the reported cases were replaced within the orbit without later enucleation^{2,4} and some were initially repositioned but subsequently enucleated¹ no report of sympathetic ophthalmia was noted in these cases. Although there is a risk of anterior segment ischemia, repositioning the globe has

psychological and cosmetic benefit. Enucleation can be performed later if necessary. This is the third reported case of bilateral subluxated globes that were successfully repositioned in the orbits. Although the patient had no light perception vision, saving his one eye reduced the psychological stress of sudden traumatic loss of vision both for him and his relatives.

Conflict of Interests

Authors have no conflict of interests.

Authors' Contributions

HR was senior surgeon. He did the patient follow up and participated in manuscript preparation. MM was assistant surgeon. She did the patient follow up and participated in manuscript preparation. All authors have read and approved the content of the manuscript.

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