



A traumatic luxation of the eyeball

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ABSTRACT

The luxation of the eyeball is the dislocation of the globe outside its orbit associated with an incarceration of the eyelid by an orbicular spasm. We report a rare case of traumatic luxation of the eyeball. Patient of 70 years old, followed for heart failure, fell down from his own height and hit the forehead and the left orbital area against the concrete floor so he was transported to the hospital with a left orbital trauma in a context of anxiety. An orbital scan reveals orbital floor fracture accompanying medial wall fracture and a preseptal tissue thickening in the left orbit without damage to the optic nerve. The reduction of the globe was performed under general anesthesia, associated with antibiotic and corticosteroid. The evolution is marked by a complete recovery of ocular motility and normal eyelid function and Improvement in visual acuity.

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Introduction

The luxation of the eyeball is the dislocation of the globe outside its orbit associated with an incarceration of the eyelid by an orbicular spasm. We report a rare case of traumatic luxation of the eyeball. To our knowledge it is the first case reported in Morocco.

Observation

Patient of 70 years old, followed for heart failure, fell down from his own height and hit the forehead and the left orbital area against the concrete floor so he was transported to the hospital with a left orbital trauma in a context of anxiety. The initial eye examination (image 1) found a protrusion of the left eye and the two eyelids hidden completely behind the eyeball with a visual acuity reduced to the light perception. periorbital ecchymosis was present, the conjunctiva was congested and chemosed associated with corneal edema and a cataract. The right eye was normal.

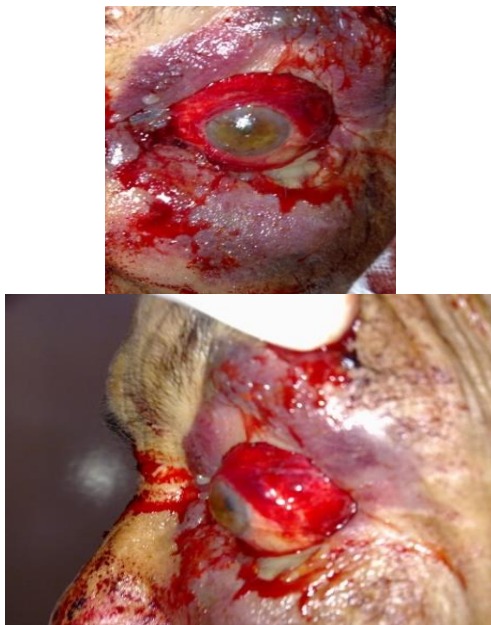


Figure 1: Pre-operative photographs with globe luxation.

An orbital scan reveals orbital floor fracture accompanying medial wall fracture and a preseptal tissue thickening in the left orbit without damage to the optic nerve (figure 2).

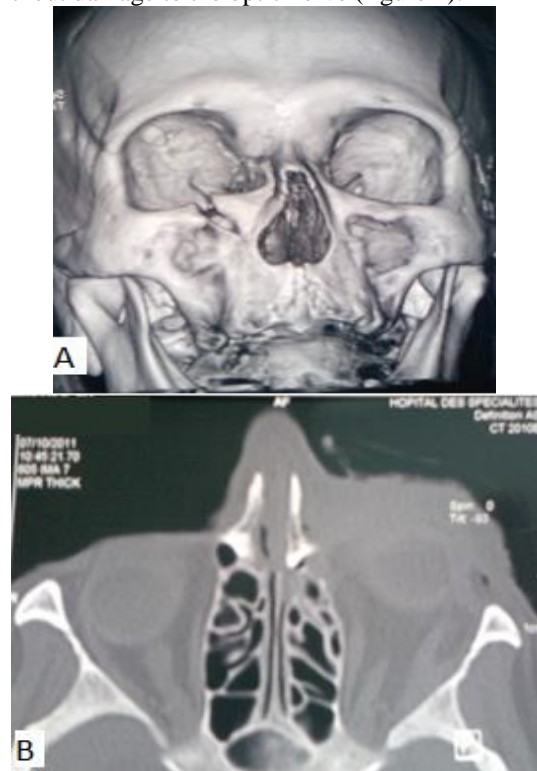


Figure 2: orbital tomography scan of the patient revealing orbital floor fracture with medial wall fracture (A) and a preseptal tissue thickening in the left orbit without damage to the optic nerve(B).

The reduction of the globe was performed under general anesthesia, associated with antibiotic and corticosteroid. Conservative treatment was the choice for fractures. The evolution is marked by a complete recovery of ocular motility and normal eyelid function and Improvement in visual acuity at 2/10 with a cataract and a normal fundus.



Figure 3: post-operative photograph immediately following reduction of the globe

Discussion

Luxation of the eyeball is a rare clinical entity. The mechanism of spontaneous dislocation seems the most common followed by traumatic dislocation as it is the case in our patient.

Black individuals and infants seem to be most commonly affected due to the shallow nature of their orbits (1-2). Other predisposing factors include laxity of the supporting muscles and fascia, Several pathologic processes craniofacial dysostoses such as Crouzon's disease (3), orbital tumors and infiltrative processes (4). Luxation of the globe is generally triggered by an increase in intraorbital pressure, minor trauma to the face, or eyelid manipulation (5).

Unlike the reported risk factors, our case had no such predisposing ocular conditions except the trauma.

Traumatic luxation of the globe can occur from significant trauma to the orbit and globe during motor vehicle crashes or during birth from compression of the skull (5).

Several cases of traumatic dislocation of the eyeball has been reported in literature. Trauma is usually trivial but it can be severe associated with fractures of the orbital frame (6) as it is the case for this patient.

The patient has probably presented an orbital trauma after a syncopal episode with a loss of consciousness. He fell down on his height and the eye was accidentally gouged by two of his fingers causing luxation.

The optic nerve damage and speed management determine the prognosis. It carries a risk of threat to permanent vision loss if appropriate intervention is not initiated on time (7).

The use of corticosteroids in our case has been justified by the suffering of the optic nerve and to decrease soft tissue edema. Systemic high-dose steroid treatment has been recommended by some authors in patients with traumatic optic neuropathy to reduce tissue swelling and thereby increase prelaminar perfusion (8).

Treatment is the reduction under sedation. The eye should be hydrated with an artificial tear gel. A lateral tarsorrhaphy may be indicated in cases of recidivism. We recommended our patient to follow up with his cardiologist to prevent another syncopal episode.

Conclusion

Traumatic dislocation of the eyeball is a rare orbital trauma. It requires an early reduction to prevent major complications involving the visual prognosis : the optic nerve suffering and keratitis exposure.

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