

Report of an Observation Case

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Abstract

Case Report

Our observation reports the rare case of a fracture incarceration of the eyeball in the maxillary sinus with fracture of the inner and lower wall of the orbit, presence of an encrusted bone fragment in the posterior segment of the eye, associated with a loss of the sphericity of the eyeball with crystalline subluxation; presents posterior involvement with divergence and limitation of adduction. We performed an adequate load load emergency in the operating room.

Keywords: Orbital fracture, ocular balloon incarceration, maxillary sinus.

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INTRODUCTION

We report from a case of a male patient 54-year-old male with no history of a particular pathological condition who presented a trauma to the left eye following a stick aggression during a residential ward of maxillofacial surgery.

General Examination

Conscious patient, stable hemodynamic with a Glasgow score at 14/15 good palmo-conjunctivo plantar staining, blood pressure: 140/70 mmhg, heart rate: 110 beats / min.

Maxillofacial Examination

left periorbital ecchymotic edema, multiple left palpebral transfixing wounds with involvement of the free edge, left upper palpebral ptosis and absence of the eyeball at the bony cavity of the eye opening eye opening, no limitation of mouth opening with a good dental articulated.



Fig-1: A: wounds transfixante left palpebral with involvement of the free edge; B: left upper palpebral ptosis; C: absence of the eyeball at the level of the bone cavity of the orbit at the opening of the eyelids

Ophthalmologic Examination

palpebral ptosis, palpebral puncture with free edge involvement, no bursting of the eyeball, left ophthalmology, reflexive mydriasis with edema of Berlin.

Para-Clinical Examinations

The facial CT performed in emergency parenchymal and bone window (in axial and coronal sections) showed a collapse of the floor of the orbit, a fracture of the inner wall of the left orbit with hernia of the eyeball with presence of an encrusted bone fragment in the posterior segment of the eye, associated with a loss of eyeball sphericity with crystalline subluxation.

Due to ophthalmological functional urgency we did not request the Lancaster test.

The patient was rushed to the operating room for diagnostic with the ophthalmic team on duty.

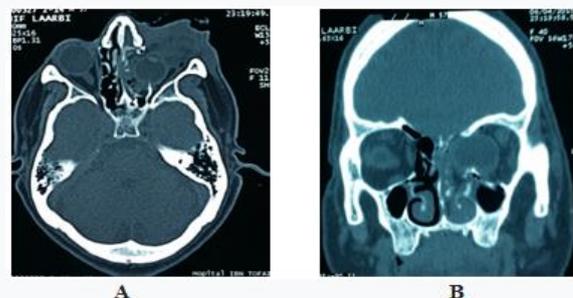


Fig-2: Scan Imaging. Facial tomography in axial section (A) and coronal section CT scan (B) showing a collapse of the floor of the orbit, a fracture of the inner wall of the left orbit with hernia of the eyeball with the presence of an encrusted bone fragment in the posterior segment of the eye, associated with a loss of sphericity of the eyeball with crystalline subluxation

Treatment

Which way do you recommend?

Pathways in fractures of the orbit walls are often debated, especially if multiple walls are involved.

The ideal approach should allow good visualization of fracture sites, easy access to placement of osteosynthesis or reconstruction equipment and a satisfactory esthetic result and especially an acceptable scar [1].

The often described pathways are Charpy's infra-ciliary, transconjunctival and palpebro-jugale pathway, which allows good exposure of the floor but makes it difficult to approach the medial wall.

There is also the paralateral-nasal route that allows the approach of the medial wall but not that of the orbital floor.

P. Scolozzi described a transcaruncular-transconjunctival combined approach allowing the approach of both walls [2].

Because of palpebral wounds in our patient, we performed a Charpy juvenile palpebral approach combined with a paratero - nasal approach, with conservation of the lacrimal sac. This allowed good exposure of fracture sites.

Reduction of the eyeball in the orbit through the approach could not be achieved due to the presence of the encrusted bone fragment, making the reduction difficult and exposing the globe to more lesion in case of significant mobilization.



Fig-3: Approach palébro-juagle combined with a paralatero-nasal

What should be done?

We associated an upper vestibular approach of CALDWELL-LUC which allowed the reduction, after trepanation of the anterior wall of the maxillary sinus, the removal of the bone fragment and the reduction of the eyeball.

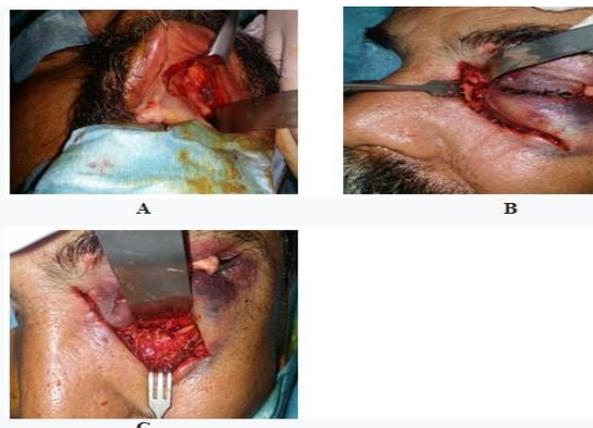


Fig-4: A: approach of CALDWELL-LUC; B: fracture exhibition internal walls of the orbit; C : Exhibition fracture of the infraorbital marging (service iconography)

How to reconstruct the orbital walls?

There is no international consensus on the material to be used for orbital reconstructions, the objective must be restitution "and integrum" of volume and orbital morphology [3].

For this, several means of reconstruction exist: autografts, allografts, heterografts or biomaterials.

In our case, the reconstruction was performed by a synthetic polymeric implant (Macropore Tekka®) [4].

What are the complications to be feared?

The most common complications due to orbital wall fractures are sequential diplopia, enophthalmia, external canthal dystopia, decreased visual acuity. They are very dependent on the speed of surgical emergency management (before the 6th hour) [5].

Eyeball trauma can be responsible for many lesions ranging from simple corneal erosion to eyeball rupture.

In our case, the patient presented with total ophthalmoplegia, a semi-myfriasis with zebra dizziness.

CONCLUSION

Our record perfectly illustrates an incarceration of the eyeball in the maxillary sinus with fracture of the inner and lower wall of the orbit, fracture of the orbital floor. Adequate emergency care has reduced ocular incarceration and reconstructed the orbital floor.

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