



INTERNATIONAL JOURNAL OF PHARMACEUTICAL RESEARCH AND BIO-SCIENCE

IMPURE BLOWOUT FRACTURE OF ORBIT – A RARE PRESENTATION

DR. K. MOHAN RAJ¹, DR. A. ANJANA CHRISTY², DR. BHARGAVI²,

1. Head Of The Department Of Ophthalmology, Sree Balaji Medical College & Hospital, Chromepet, Chennai - 600044
2. Postgraduate Of Ophthalmology, Sree Balaji Medical College & Hospital, Chromepet, Chennai - 600044

Accepted Date: 24/08/2015; Published Date: 27/10/2015

Abstract: Fractures in the facial skeleton are common particularly in road traffic accidents and may lead to complications caused either by the injury or by the surgery. We are reporting a case of impure blowout fracture of both orbits with involvement of rims, hemosinus and impairment of vision. Despite comminuted fractures in both orbits, this patient regained normal vision, since the optic foramen was not injured. This patient recovered dramatically following prompt surgical intervention with subsidence of edema of soft tissues of orbit.

Keywords: Orbit, blowout fracture, hemosinus



PAPER-QR CODE

Corresponding Author: DR. K. MOHAN RAJ

Access Online On:

www.ijprbs.com

How to Cite This Article:

K. Mohan Raj, IJPRBS, 2015; Volume 4(5): 348-352

INTRODUCTION

45 years old male was brought to the casualty at around 12.06 midnight with alleged history of Road traffic accident (two wheeler Vs two wheeler) around 8.30pm on 24th June 2015. He sustained injury to forehead and right side of face. Nasal bleeding was present. No history of loss of consciousness .He was not a known diabetic or hypertensive .Patient gave a past medical history of pulmonary tuberculosis but he was not on treatment .There was no history of seizures, abdominal pain, vomiting. On examination, patient was conscious, oriented to time, place and person. Temperature was normal. Pulse was 115/min and blood pressure was 130/90 mmhg. Glasgow coma scale was 15/15. A lacerated wound was present on right forehead and a punctured wound in right cheek. Bilateral air entry was equal but crepitations were present. Per Abdomen examination revealed no abnormality.

On ophthalmic examination bilateral periorbital edema was present. Subconjunctival hemorrhage and chemosis were seen in the right eye. Left eye had ecchymosis in the lower lid. Subcutaneous emphysema was present in the periorbital region. Cornea and lens were clear in both eyes. Visual acuity was 6/18 in both eyes. Size of the pupils and direct and consensual reactions were normal. Extraocular movements were normal. Undilated fundus examination was within normal limits.

Radiological examination: CT Brain showed soft tissue scalp swelling and emphysema in the right temporoparietal and left front temporal region. Small foreign body was noted in left frontal scalp region.. CT facial bones showed bilateral extensive infraorbital emphysema.

1. Undisplaced fractures were noted in the posterior aspect of both zygomatic arches.
2. Fractures were also noted in anterior aspect of right zygomatic arch.
3. Grossly comminuted fracture involving lateral wall, floor and anteromedial wall of right and left orbit were also seen.
4. Fractures involving floor of both orbits and infraorbital rims were also noted.
5. Fractures also involved anterior, medial and lateral walls of both maxillary sinuses.
6. Comminuted fractures were noted involving right half of hard palate anteriorly to maxillary alveolar surface between lateral incisor and canine teeth.
7. Grossly comminuted fracture involving bilateral pterygoid plates was also seen.
8. Comminuted nasal bone fractures with depression and grossly comminuted fracture involving nasal process of left maxilla with displacement were seen.

9. Nasal septum fracture (anterosuperior as well as posterior and mid one third) was also present.

10. Hemosinus was seen in both ethmoid and maxillary sinuses

The patient was administered systemic antibiotics and anti-inflammatory agents. Following prompt surgical intervention, the edema of soft tissues of orbit reduced and normal vision was restored.

DISCUSSION:

Blowout fracture of the orbit is caused by sudden increase in the orbital pressure by an impacting object larger than 5 cm in diameter. Fracture most frequently involves the floor of the orbit along the thin bone covering the infraorbital canal. Occasionally medial orbital wall can also be fractured.

Pure blowout fracture does not involve the orbital rim whereas impure fractures involve the rim and adjacent facial bones. Infraorbital nerve anesthesia is very common because the fracture frequently involves the infraorbital canal. Diplopia and enophthalmos are common associated findings.

In this case, despite comminuted fractures involving both orbits, the extraocular movements were normal, since there was no entrapment of muscles in the fracture.

CONCLUSION:

This case is reported for its rarity. Even though the patient had multiple fractures involving both orbits, the vision was normal, since the optic foramen was not involved. The patient recovered subsequently following surgical intervention by the oro- maxillofacial surgeon. Normal vision was also restored due to reduction in edema of soft tissues of the orbit. Prompt surgical correction will restore normal integrity of the orbits.



Fig.1 CT showing multiple facial bone fracture

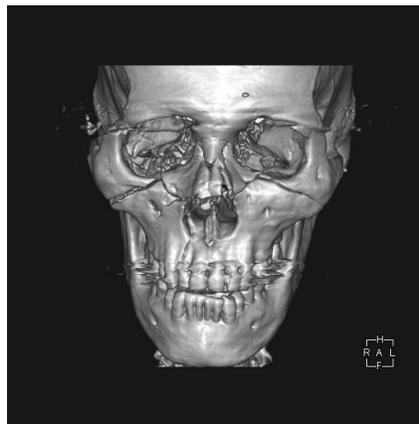


Fig.2 3D reconstruction of CT showing orbital wall fractures



Fig.3 CT showing bilateral optic canals

REFERENCES:

1. Jeffrey M Joseph, Joannis P Glavas, Orbital fractures: a review: Clin Ophthalmol. 2011; 5: 95–100.
2. Gosau M, Schoneich M , Draenert FG, Ettl T, Driemel O, reichert TE , Retrospective analysis of orbital floor fractures--complications, outcome, and review of literature. Clin Oral Investig. 2011 Jun;15(3):305-13.
3. Neovius E, Fransson M, Matthis SP, Persson C, Ostlund S, Famebo F, Lundgren TK, Persistent diplopia after fractures involving the orbit related to nerve injury. J Plast Reconstr Aesthet Surg. 2015 Feb; 68(2):219-25.
4. Michael A burnstine, Clinical recommendations for repair of isolated orbital floor fractures, American academy of ophthalmology journal, July 2002 Volume 109, Issue 7, Pages 1207–1210
5. Rajan G B, Pugazhendi R. Impure blow out fracture of orbital floor. Indian J Ophthalmol 1984;32:31-3
6. S Lerman, Blowout fracture of the orbit. Diagnosis and treatment. Br J Ophthalmol. 1970 Feb; 54(2): 90–98.