

Blindness after Maxillofacial Trauma

Mohammad Akheel¹, Suryapratap Singh Tomar²

1 Junior Registrar, Dept of Oral & maxillofacial surgery, NMCH, Nellore, India. 2 Senior Registrar, Dept. of Neurosurgery, NMCH, Nellore, India.

Dear Sir,

Blindness following maxillofacial trauma is very rare complication representing around 0.67 to 3 %¹. It is most commonly seen in posterior orbital fractures, retrobulbar hemorrhage causing increase in intraorbital pressure, direct injury to optic nerve (rare) or any indirect injury to the nerve (common), lacerations of the optic nerve sheath, fracture of zygoma body which constitutes the lateral wall of the orbit, retinal arteriolar occlusion.^{2,3}

A 35 year old male reported to department of emergency following road traffic accident. His Glasgow Coma Scale was 14/15. Clinical examination revealed circumorbital ecchymosis and oedema, Proptosis, of left eye with mild subconjunctival hemorrhage with left zygomatic body and arch fracture. He had a laceration of 3x2 cm on left cheek. His Vision of left eye was blurred and had deteriorated from the time of trauma while right eye was normal. Left ocular movements were restricted. Pupil was dilated for 2mm. Computed tomography (CT) PNS view of skull revealed fracture of zygomatic body on left side and retrobulbar hemorrhage of left eye with comminuted posterior orbital floor fracture.

Patient was started on intravenous Dexamethasone, acetazolamide and mannitol (Anderson mega dose). He was planned for drainage of retrobulbar hemorrhage by lateral canthotomy of left eye. Patient was operated for zygomatic body and arch fractures which were fixed with 2mmx2 holed titanium plates with 2mm x 6mm screws. Patient was monitored for his improvement of vision postoperatively. Ocular movements were present and were improving. Complete normal visions with all ocular movements were seen on 21th postoperative day.

This letter highlights the return of vision following the management of maxillofacial fractures.

However there are certain reports in literature which have been reported for blindness after maxillofacial trauma treatment which is around 0.24% occurring after sever maxillofacial injuries around the eye. Any changes occurring around the optic nerve canal cause ischemic optic nerve injury due to increase in intraorbital pressure and causes blindness which may be temporary or permanent. Ashar et al⁴ noted 22% of midfacial fractures involving the orbit resulted in permanent blindness. MacKinnon et al⁵ reported that the lateral orbital wall of zygomatic body were the most commonly fractured areas in the patients with significant ocular sequelae. So blindness can be seen either after a severe maxillofacial trauma or can be manifested as rare complication after treatment of maxillofacial fractures. Management is usually by relieving pressure on optic nerve by lateral canthotomy and administration of Anderson's mega dose⁶.

Referances:

1. Holt G R, Holt J E. Incidence of eye injuries in facial fractures: an analysis of 727 cases. *Otolaryngol Head Neck Surg.* 1983;91:276–279.
2. Koo L, Hatton M P, Rubin P A. Traumatic blindness after a displaced lateral orbital wall fracture. *J Trauma.* 2007;62:1288–1289.
3. Popat H, Doyle P T, Davies S J. Blindness following retrobulbar haemorrhage—it can be prevented. *Br J Oral Maxillofac Surg.* 2007;45:163–164.
4. Ashar A, Kovacs A, Khan S, Hakim J. Blindness associated with midfacial fractures. *J Oral Maxillofac Surg.* 1998;56:1146–1150. discussion 1151.
5. MacKinnon C A, David D J, Cooter R D. Blindness and severe visual impairment in facial fractures: an 11 year review. *Br J Plast Surg.* 2002;55:1–7.

6. Anderson R L, Panje W R, Gross C E. Optic nerve blindness following blunt forehead trauma. *Ophthalmology*. 1982;89:445–455.

Corresponding Author

Dr. Mohammad Akheel

Junior Registrar, Dept of Oral & maxillofacial surgery, NMCH, Nellore, India.

E-mail: drakheelomfs@gmail.com

ISSS