



Orbital fracture management: The unclaimed domain of Oculoplasty

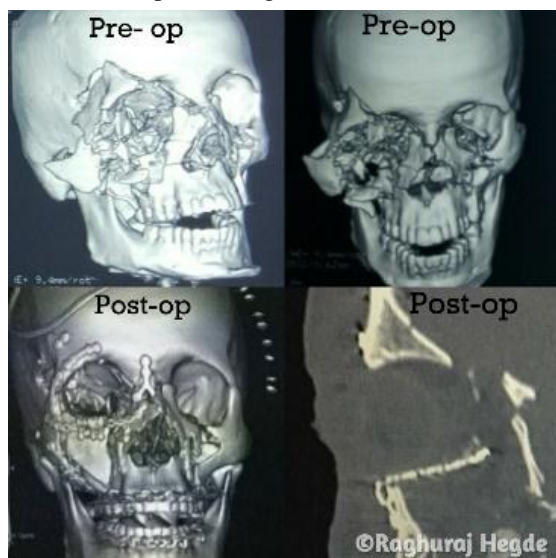
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The major share of orbital and facial trauma in India is from road traffic accidents. India has one of the highest number of road fatalities in the world and most of it involving Motorized Two-wheeler vehicles (MTV). Nearly 76% of the motor vehicles sold in India are MTVs. Due to poor legislation and enforcement, most MTV riders and pillion riders do not wear certified helmets, thus causing increased number of facial and head injuries.¹

According to the published Ministry of Road Transport and Highways Data (2016), 1,50,785 people were killed and 4,94,624 were injured in road crashes in India in 2016. It represents a 32% increase since 2007 which is a near tenfold increase since 1970. The number translates to 413 fatalities every day and 17 deaths every hour due to road crashes. India does not have a National Accident Registry so the number of actual people injured might be much higher than recorded by the transport ministry.² The advanced motor vehicle technology and better roads in the last two decades is responsible for the increased levels of high-velocity accidents with more severe facial and head injuries than seen in earlier decades in India.

Meta-analysis of several independent studies shows that around 40 percent of all maxillofacial traumas involve the orbital structures.³ Orbital blowout fractures are usually a small subset of all the orbital fractures presenting in high volume trauma centres. However, blowout fractures are the kind that usually land up in a regular ophthalmic practice in India or walk into an exclusive eye hospital. The Orbito-zygomatic fractures, naso-orbito-ethmoidal fractures and frontal bone fractures present very frequently in high volume trauma centres and orbital involvement is significant enough to warrant the involvement of an oculoplastic surgeon.⁴ However, very rarely are oculoplastic surgeons part of the teams reconstructing complex facial fractures involving other parts of the face like cranium, mid-face and mandible. The number of complex orbital trauma cases is too big a number in India to ignore and not have an oculoplastic surgeon on board.



Many of the maxillofacial surgeons practicing in India lament the lack of oculoplastic surgeons in the field of facial trauma care and that the maxillofacial/general plastic surgeons are forced to handle orbital fractures – in which they are not trained specifically to operate on- out of pure necessity rather than to usurp the role of the oculoplastic surgeon. From a personal survey during my initial period of practice immediately after my fellowship, several maxillofacial and general plastic surgeons I spoke to did not even know the term, “Oculoplasty” as a sub-speciality of Ophthalmology, so they were completely oblivious of the existence of “oculoplastic surgeons” whom they could call in cases of facial reconstructions. Many others were disappointed after having invited ophthalmologists to be part of their team but found them unwilling to spend long hours required to reconstruct the trauma victims’ faces- hence they were not more open to the idea of an eye surgeon being part of their teams.

From personal anecdotal experience in Bangalore (where I practice), in a significant majority of cases of facial trauma involving orbital structures operated by non-oculoplastic surgeons, the orbital fractures were either left un-repaired or were repaired sub-optimally. This in turn gave rise to late complications like enophthalmos, orbital deformities, long standing irretractable diplopia, frozen orbits, contracted sockets, eyelid malpositions, implant exposures/displacements, use of wrong alloplastic implants,

wrong use of correct alloplastic implants, secondary nasolacrimal duct obstructions and others. These cases may likely have benefited from the expertise of an oculoplastic surgeon during the primary surgery. Treating such cases for orbital deformities at a later date would be problematic due to fibrosis, callus formation and malunion of broken and displaced orbital bones. An oculoplastic surgeon has better knowledge of orbital anatomy and techniques to tackle orbital structures. They have micro-surgical skills which can translate to better outcomes in patients especially if their expertise is used at the primary repair stage and not as is usual, referred to the ophthalmologist when post-surgery, the patients present with late complications like enophthalmos, un-resolving diplopia or secondary optic nerve atrophy.

An ideal facial reconstructive team should comprise of a Neurosurgeon, An Oculoplastic surgeon, An ENT surgeon and a Maxillofacial Surgeon. One or many of the above specialists should be involved as per the extent of injury in a particular patient. One needs to establish a good working relationship where each surgeon on the team has a healthy respect for each other's role in facial reconstruction and also understands the limitations of each sub-speciality in reconstruction of the face.

The sub-speciality of oculoplastic surgery is in a nascent stage and is still evolving in India. Management of all types of orbital fractures should be in the armamentarium of oculoplastic surgeons and they should be confident in managing orbital fractures from the get-go. Fellowship training programs in oculoplasty should include collaborative training under other specialities like maxillofacial surgery, Rhinology, Neurosurgery and Radiology for learning the latest techniques and use of new cutting edge technology and modern implants in the management of facial trauma. Oculoplastic surgeons need to embrace the bridging sub-speciality that ophthalmic plastics is and develop a team consisting of specialists outside of ophthalmology especially in cases of facial trauma. This movement should be spearheaded by the big eye institutes of India-both private and government- and should encourage collaboration of their oculoplastic surgeons with multi-speciality hospitals, medical colleges and trauma centres. In the same vein, oculoplastic surgeons need to receive better training and hands on experience in orbital fracture repair and plating during their fellowship period.

The AOCMF* regularly organizes cranio-maxillo-facial fracture plating workshops in India and abroad which are mostly attended by our cranio-maxillofacial colleagues. We need OPAI, OTSI and AIOS# to collaborate with AOCMF in organizing more such workshops and fellowships which will include oculoplastic surgeons. This will in the long run benefit not only the oculoplastic surgeons but also patients who will in turn have better surgical outcomes. Oculoplastic surgeons need to claim this domain in the field of facial trauma which is rightfully theirs!

*AOCMF- *Arbeitsgemeinschaft für Osteosynthesefragen* (German: "Association for the Study of Internal Fixation") *Cranio-Maxillo-Facial* (aocmf.aofoundation.org)

#OPAI- Oculo-Plastics Association of India, OTSI- Ocular Trauma Society of India, AIOS- All India Ophthalmic Society

References

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