“A CLINICAL STUDY OF ORBITAL FRACTURE FOLLOWING ROAD TRAFFIC ACCIDENT IN A TERTIARY CARE CENTRE”

By

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Dissertation submitted to the Rajiv Gandhi University of Health Sciences, Bangalore, Karnataka
In partial fulfilment of the requirements for the degree of

MASTER OF SURGERY IN

OPHTHALMOLOGY

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ABSTRACT

Introduction:
The incidence of road traffic accidents is on the rise and associated with it are the facial trauma. Studies have estimated that orbital fractures account for roughly 10 to 25% of all cases of facial fractures. The reported incidence of ocular injuries in patients with orbitozygomatic fractures varies widely ranging from 2.7% to 90%. In association with severe disfigurement of the face can also occur severe ocular injuries. The ophthalmic involvement is inevitable in mid-facial fractures as the soft tissues absorb more energy at the time of impact than the underlying bones. Ocular injury may result in severe dysfunction of the visual apparatus, if not detected shortly after injury. This study has been designed to analyse the pattern of orbital fracture following road traffic accident and to study the pattern of ocular injuries associated with it.

Materials and Methods:
A cross sectional study was carried out on patients with orbital fractures who reported to our ophthalmology clinic between November 2011 to October 2012 and above the age of 18 years were include in the study. Patient’s demographic details and information regarding the accident were obtained. Patients underwent a thorough ophthalmic examination and the site of the orbital fracture was obtained from the CT scan.

Results:
Out of 51 patients 45(88.23%) and 6(11.7%) were male and female respectively. Most common age group of presentation was 18-30 years accounting for 31(60.7%) of the patients. Out of 51 patients, 40(78.4%) patients had 6/9 or better
vision, 4(7.8%) had 6/60-6/12, 6(11.8%) had vision in counting finger and HM and 1 patient had only perception of light. 56.8% of the patients have complex fracture involving two or more walls of the orbit. Among the orbital fracture 34(66%) had lateral wall, 28(54%) had floor, 17(33%) medial wall and 13(25%) had roof fracture. Important ocular complications include diplopia 8(15.6%), restricted EOM 11(21.5%), defective visual field 10(19.6%), traumatic optic neuropathy 10(19.6%), enophthalmos 10(19.6%), infraorbital dysaesthesia 7(13.7%), 3rd nerve palsy in 2 patients and orbital apex syndrome and sphincter tear and in 1 patient each.

50(98%) patients were not wearing any of the protective measure during the road traffic accident.

Conclusion

Males most commonly in their third decade of life are affected in RTA’s, complex ZMC fracture involving two or more walls are more common in MVAs compared to isolated wall fracture. Lateral wall is the most common wall to be involved. Most common presenting signs of orbital fractures include transient complications like subconjunctival hemorrhage and periocular ecchymosis. Orbital fracture associated with MVA’s are associated with higher incidence of TON when compared to other etiological causes of orbital fracture and are more commonly associated with lateral wall fractures and use of protective equipment are low even though there are strict laws in place.

KEY WORDS: Orbital fractures; Ocular complications; road traffic accidents.