

**A Study on Faciomaxillary Injuries in a Tertiary Care Hospital Bikaner Rajasthan**Dr. Kedar Nath¹, Dr. Deepak Meena², Dr.G.L.Meena³¹Senior Specialist, ²Resident Doctor, ³Senior Professor.¹Department of General Surgery PBM Hospital Bikaner,²Department of Dental Mahatma Gandhi Hospital, Jaipur.³Department of Radiology, PBM Hospital Bikaner.**Correspondence Author: Dr. Deepak Meena**, Department of Dental Mahatma Gandhi Hospital, Jaipur.**Conflicts of Interest:** None to Declare**Abstract**

Background: Faciomaxillary injuries are increasing in frequency and severity due to road traffic accidents and violence. Alcohol plays a major role both in road traffic accidents and assaults resulting in faciomaxillary injuries. Human bites play a significant role in the soft tissue injuries of the face resulting in loss of lobule of ear, nasal tip loss and partial loss of lower lip.

Methods: The study was conducted in the Department of Surgery of S.P. Medical College, Bikaner, India between 2015-2016. About 50 patients with various soft tissue and bony injuries of the faciomaxillary region were studied. Age, sex, time, mechanism and aetiology of injury, history of bleeding, unconsciousness and prior first aid, type of vehicle and use of preventive measures, type of fracture, associated injuries and treatment modalities were evaluated.

Results: Faciomaxillary injuries were mostly due to road traffic accidents. Highest number of fractures was predominantly occurring in the age group of 21-30 years. Males incurred more fractures with a male to female ratio of 1.77:1. Fracture mandible was the most common followed by zygoma, nasal and naso ethmoid fractures. Pan facial fractures were more common among alcoholics. 4 patients had associated head injury.

Conclusions: Drunken driving should be curbed in the society. Educating the people about road safety rules will bring down the faciomaxillary injuries. Motivating the public against violence will reduce human bites and soft tissue injuries of the face.

Keywords: Alcohol, Faciomaxillary fractures, Soft tissue injuries.

Introduction

Faciomaxillary region involves soft and bony tissues and being the most exposed part of the body, it is particularly prone to trauma. Faciomaxillary injuries represent one of the most life-threatening problems in developing and developed nations representing 7.4-8.7% of the emergency medical care.^{1,2}

These injuries are often associated with severe morbidity due to their close proximity to vital organs such as brain and cervical vertebrae causing loss of function and death. The pattern of faciomaxillary injuries varies with geographical area, socioeconomic condition, enforcements of law and order of a country. Road traffic accidents, interpersonal conflicts, assaults, and sports injuries are responsible for faciomaxillary injuries.³ Road traffic accidents constitute an important cause of preventable morbidity, mortality, and disability. High-velocity trauma is usually seen in urban and semi-urban areas while low-velocity trauma is seen in rural areas.

Alcohol consumption has become a daily habit of every third individual in the country and is responsible for accidents and assaults. Because of high morbidity of faciomaxillary injuries, an epidemiological analysis is necessary to implement strict protocols and conduct prevention programs for public health awareness.

Methods

The patients with faciomaxillary injuries managed in the Department of Surgery, S.P. Medical College, Bikaner, India in a time span of one years (2015-2016) were selected for the study. All patients were treated irrespective of age, sex, caste, religion and socioeconomic status.

Patients were evaluated for soft tissue injuries of the face and any maxillofacial fracture by assessing clinically the displacement of fractured fragments, functional and cosmetic deficits, patient's age and patient's medical status. Exact determination of the site and pattern of bony injury was determined by correlating it radio graphically. The parameters on which patients were evaluated included; age of patient, gender distribution of patient, time of injury, aetiology of fracture, mechanism of injury, type of vehicle, type of passenger (driver/pillion rider), use of helmet or seat belts, under the effect of alcohol or drugs, history of bleeding, history of unconsciousness, any prior first aid, X-rays advised, site of fracture, associated injuries and treatment modalities. The significances of the findings were evaluated using Pearson Chi-Square test.

Results

Table 1: Age wise distribution of patients.

Age group (years)	Number of patients
10-20	3
21-30	16

31-40	12
41-50	10
51-60	5
More than 61	4
Total	50

Table 2: Pattern of faciomaxillary injuries.

Gender	Soft tissue injuries	Bony injuries	Both soft tissue and bony injuries
Male	9	11	12
Female	5	4	9

Table 3: Time of injury.

Time	Number of patients
Morning	12
Midday	10
Midnight	28

Table 4: Associated injuries.

Associated injuries	Number of patients
Cervical spine injury	2
Head injury	4
Thoracic injury	2
Limb injuries	3

Among the 50 patients, 14 (28%) were under the effect of alcohol.

Out of total 50 patients, 6 patients reported history of unconsciousness. The fracture mandible was the most common faciomaxillary injury, followed by fracture zygoma, fracture maxilla and nasal bone injuries. Among the soft tissue injuries eyelid injuries, lip tears and avulsion injuries of the ears were common.

Discussion

The effectiveness of various preventive and educational programs with respect to maxillofacial trauma may be reflected through continuing audit of the pattern of such trauma in different parts of the world. Considerable variation has been reported in the profile of facial injuries with respect to the geographical location, socioeconomic status, and cultural background.

The pattern of age distribution in maxillofacial injuries demonstrated that people of all ages were affected; the peak incidence was, however, observed in the age group of 21-30 years (32.00%).

This finding is in accordance with a number of previous studies in India as well as other parts of the world.^{1,2,3} The third decade is perhaps the most active period of life in which people tend to remain outdoors in search of their livelihood and are thus more vulnerable to vehicular accidents, falls, and assault related injuries. Individuals in the extremes of life were found to be least affected.

The gender distribution revealed a male preponderance in all the age groups as has been reported in other studies. The male: female ratio in the sample (1.7:1) was higher than other authors.¹

The greatest incidence of maxillofacial trauma (56.00%) was observed in the evening hours between 4 pm and 12 am. This may be attributed to the substantial increase in traffic after the office hours, when people are returning

home, and to a tendency to consume alcohol in the evenings.⁴

The etiology of maxillofacial injuries is known to vary from one geographical region to another. Road traffic accident is generally believed to be the most common cause of facial trauma in developing countries.⁵

Conclusion

Faciomaxillary injuries occur most commonly due to road traffic accidents and interpersonal violence. Fracture mandible, zygomatic complex associated with soft tissue injuries of face are more common. Drunken driving should be curbed in the society. Educating the people about road safety rules will bring down the faciomaxillary injuries. Provision of pedestrian friendly paths, segregation of heavy and light motor vehicles and strict governance of traffic by authorities, especially during late evening hours and on weekends is a must to minimize the physical, psychological, and emotional distress associated with trauma in general and maxillofacial trauma in particular

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