

Most Common Etiology of Maxillofacial Trauma - A Retrospective Study

Dr. Anupam Bhardwaj*¹, Dr. Ashish Sharma², Dr. Amit B. Lall³,
Dr. Bharti Dua⁴, Dr. Mayank Singhal⁵, Dr. Sanjeev Tomar⁶

¹ Senior Lecturer, Department of Oral & Maxillofacial Surgery, Santosh Dental College, Santosh Deemed To Be University, Ghaziabad, Uttar Pradesh, India.

² Professor and Head, Department of Oral and Maxillofacial Surgery, ITS Dental College Greater Noida.

³ Professor and Head, Department of Oral & Maxillofacial Surgery, Santosh Dental College, Santosh Deemed To Be University, Ghaziabad, Uttar Pradesh, India.

⁴ Senior Lecturer, Department of Prosthodontics, Santosh Dental College, Santosh Deemed To Be University, Ghaziabad, Uttar Pradesh, India.

^{5,6} Associate Professor, Department of Oral & Maxillofacial Surgery, Santosh Dental College, Santosh Deemed To Be University, Ghaziabad, Uttar Pradesh, India.

Email- ¹ dranupambhardwaj@gmail.com, ² drashishsharma.omfs@gmail.com,

³ dr_abl@yahoo.co, ⁴ drbharti Dua@gmail.com, ⁵ drmayank.omfs@gmail.com,

⁶ drstomar@yahoo.com

ABSTRACT:

Objective- The primary objective of this study was to determine the most common cause of maxillofacial trauma.

Methodology- Data collection was done retrospectively from the previous records of 10 years for patients affected with facial trauma along with cause, age was also recorded.

Results- Total 110 patients were included in the study on meeting the inclusion and exclusion criteria. Most common cause of maxillofacial trauma was RTA followed by interpersonal violence.

Conclusion- RTA is the most common cause of maxillofacial trauma followed by interpersonal violence, the young age group ranging from 21-30 being the most affected age group.

Key words: Associated injuries, Facial trauma, Road traffic accident.

INTRODUCTION:

Maxillofacial trauma can occur due to high and low force of impacts arising from road traffic accidents (RTA), assaults, gunshot wounds, blasts, sports, falls etc. Mostly all age groups are affected but young age group being the most predominantly affected. Etiology of maxillofacial trauma can vary from country to country depending on socioeconomic status,

road traffic management along with the type of weather. Cause of maxillofacial trauma can also vary over time. There is rise in RTA incidences in India, it can be attributed to the fact that with increase in the population in India more and more people are using vehicles for work and travel and condition of road in India is deteriorated. Number of people affected due to RTA is very high around fifteen to twenty million people are affected. In India death rates due to RTA is twenty times more as compared to developed countries. Death due to RTA in developed countries is one in one thousand vehicles, whereas in India it is eight in one hundred vehicles. Alcohol intoxication is one of the most important contributing factor present in around half of the seriously injured cases. The initial assessment of a person who is injured significantly from polytrauma is a challenging task and each minute makes a difference between life and death. So immediate diagnosis and intelligent cooperation between different specialties may greatly affect the outcome and hence lessen the mortality and morbidity in road trauma patients.^[1-4]

Most of the studies on etiology of facial fractures are from developed countries where facial traumas are mainly caused by interpersonal violence. Reports from developing countries where the leading etiology is road traffic crashes are scarce. The aim of the study was to determine the etiology of maxillofacial trauma.

MATERIALS AND METHODS:

This Retrospective study was carried out from records of 10 years to evaluate the etiology of maxillofacial trauma.

Inclusion Criteria: Cause of Maxillofacial injury patients along with age were included in the study.

Exclusion Criteria: Patients with incomplete records were excluded from the study.

Data was analysed in SPSS version 16.0. The frequency and percentage were computed for qualitative variables.

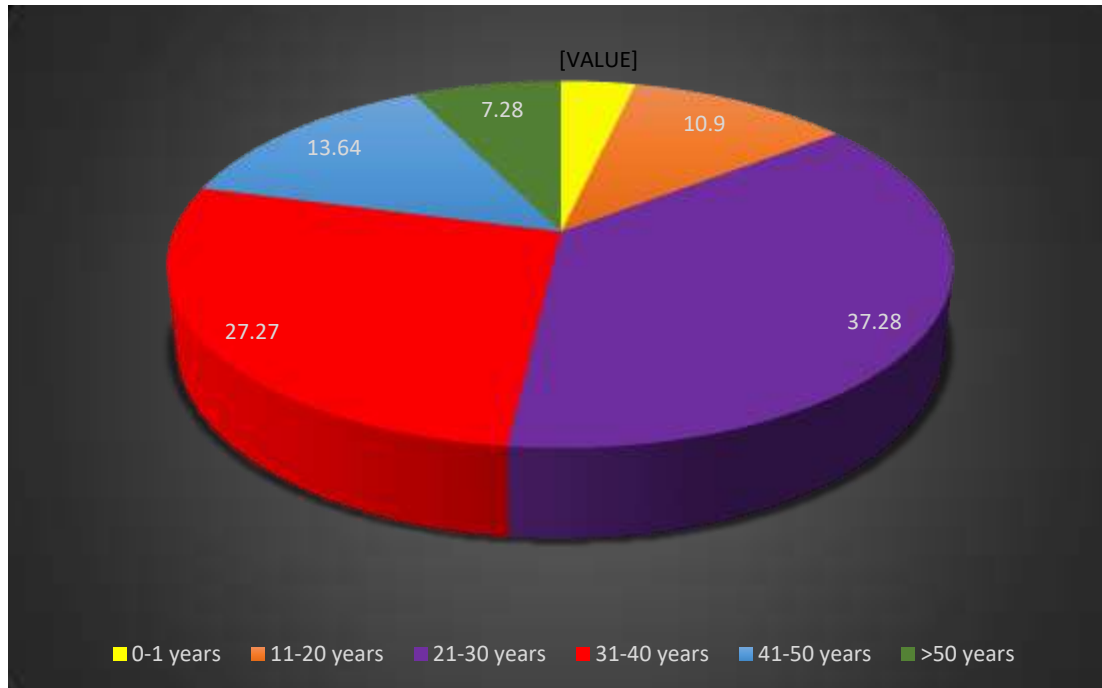
RESULTS:

Out of 110 patients of maxillofacial injuries, a total of 69 patients suffered from the injury due RTA, whereas 18 cases were of interpersonal violence and 11 cases were of fall from the stairs. (Table 1)

Table 1. Distribution of study subjects according to cause of trauma

Cause	Number of subjects	% of subjects
Road traffic accident	69	62.73
Inter personal violence	18	16.36
Fall from stairs	11	10.00
Fall from roof	12	10.91
Total	110	100

All age group was affected but most common affected age group was ranging from 21-30 years (37.28%), followed by 31-40 (27.27%).



Pie chart 1- Distribution of study subjects according to age

DISCUSSION:

Injuries to limbs, hip and chest occur due to various impact forces, which can vary from low to very high such as fall or road traffic accidents (RTA), and mostly all age groups are affected. Immediate diagnosis and intelligent cooperation between various specialities may greatly affect the outcome and hence lessen the mortality and morbidity in RTA patients.^[5]

The aim of the study was to determine the etiology of maxillofacial trauma. It has been reported that etiology of maxillofacial traumavaries widely between different countries.^[6,7]

One amongst the most probable reasons which may be liable for major amount of RTA in the younger age group can be the higher number of drivers in this particular age group along with fearless driving and disregard of traffic rules^[8]. It can also be explained by the fact that youth being involved in productive activities requires to move fast from one place to another and they risk themselves in being involved in a greater number of road traffic accidents. More people in younger age group use vehicles for work as well as commute.

In developing country like India most of the drivers are illiterate so they are unable to read simple traffic signs and also hold the traffic rule in contempt thus risking the safety of persons on the street. Vehicles with two or three wheels are less stable so they provide less

protection to the riders and the occupants. Even two wheeled vehicles with high engine power with poor road conditions can lead to increase RTA^[9-11].

Law enforcements in India are very poor due to corruption and bribery, use of helmet by riders is not taken seriously and seat belts use is also very rare. Motorcyclists without helmet are 5 times more likely to suffer injury than those wearing helmet. The etiology of maxillofacial trauma with associated injury in this study may have been influenced by the non-enforcement of the seat belt and motorcycle helmet legislation in India^[12]. In the UK, where the use of seat belt and motorcycle helmet is mandatory, there has been a reduction in severe injury and death due to RTA.^[13,14]

Manson^[12] has shown this high incidence of maxillofacial injuries in about 75% of RTA victims. Number of trauma centres in India are on rise along with better facilities of ambulance service, in some metro cities even air ambulance is being used for quick transport in case of emergencies, thus increasing the survival rate of patients. Treatment of RTA patients along with cost also depends on factors such as hospital facilities, operator and patient willingness to the advised mode of treatment.

There is need for better traffic rule implementation, better police, less corruption and bribery. Educating the people about traffic rules by using innovative methods specially in younger group role model must promote safe driving with use of safety gears.

Various policies keeping the younger age group in mind should be made and implemented. The limitations of the study include (i) only inpatient records were included for analysis and (ii) as this is a retrospective study, we were not able to gauge the impact of maxillofacial fracture had on the patient's social life. More work need to be done for evaluation of the patient's social life.

CONCLUSION:

In conclusion, RTA is the most common etiology in maxillofacial trauma. Males are predominantly affected with age group ranging from 21-30 being the most commonly affected. Interpersonal violence being the second most common cause of injuries. Thus, implementation of traffic rules firmly and profoundly is necessary to decrease the casess of RTA. Well-equipped trauma centre with better ambulance services can decrease the mortality rate.

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