

Original Research

Assessment of traumatic maxillofacial injuries- A clinical study

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ABSTRACT:

Background: Trauma is an inevitable part of human life, which is also the 5th leading cause of death and disability worldwide. The present study was conducted to assess cases of traumatic maxillofacial injuries. **Materials & Methods:** 125 cases of maxillofacial trauma of both genders were included. The cause of trauma, and nature of the injury such as injuries to teeth, injuries to the mandible, injuries to the maxilla, injuries to zygomaticomaxillary complex (ZMC), temporomandibular joint, and injuries to soft tissues etc. was recorded. **Results:** Out of 125 patients, males were 70 and females were 55. The cause of trauma was RTA seen in 60, violence in 30, industrial accident in 25 and others in 20 cases. Common injuries were mandibular in 30, dentoalveolar in 45, TMJ in 10, zygomatic- temporal in 13, maxillary in 15 and soft tissue injuries in 12 cases. **Conclusion:** Most common cause of trauma was road traffic accident and site was dentoalveolar region.

Key words: Dentoalveolar, Road traffic accident, Trauma

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INTRODUCTION

Trauma is an inevitable part of human life, which is also the 5th leading cause of death and disability worldwide and accounts for approximately five million deaths annually. It can be caused by natural disasters or by human-made accidents. Victims of trauma suffer injuries ranging from small lacerations to permanent disfigurement or even loss of life.¹ Maxillofacial trauma causes injuries to skeleton components, dentitions as well as soft tissues of the face and frequent cause of presentations in an emergency department. Varying from simple, common nasal fractures to gross comminution of the face, management of such injuries can be extremely challenging.²

Natural disasters are something that humanity had to deal with since its inception. Early exposure of humans to natural disasters has helped man to develop many protective measures and also to achieve a state of preparedness to face any natural disaster.³ Road traffic accidents involve people of all ages, but most

are young adults. In India the incidence is increasing because the population is growing, more people are using motorised vehicles, and conditions on the roads are deteriorating.⁴ Twenty times more deaths are caused by road traffic accidents in India than in developed countries: 8 people are killed/100 vehicles, whereas in developed countries, one person is killed/1000 vehicles. Alcohol is an important factor in these accidents and it may be involved in up to half of those that are serious.⁵ The present study was conducted to assess cases of traumatic maxillofacial injuries.

MATERIALS & METHODS

The present study comprised of 125 cases of maxillofacial trauma of both genders. Enrolment of patients into the study was done after obtaining their written consent.

Demographic data of each patient such as name, age, gender etc. was recorded. Parameters such as cause of

trauma, and nature of the injury such as injuries to teeth, injuries to the mandible, injuries to the maxilla, injuries to zygomaticomaxillary complex (ZMC), temporomandibular joint, and injuries to soft tissues, influence of alcohol etc. was recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 125		
Gender	Males	Females
Number	70	55

Table I shows that out of 125 patients, males were 70 and females were 55.

Table II Cause of trauma

Cause	Number	P value
RTA	60	0.04
Violence	30	
Industrial accident	25	
Others	20	

Table II, graph I shows that cause of trauma was RTA seen in 60, violence in 30, industrial accident in 25 and others in 20 cases. The difference was significant ($P < 0.05$).

Table III Type of injuries

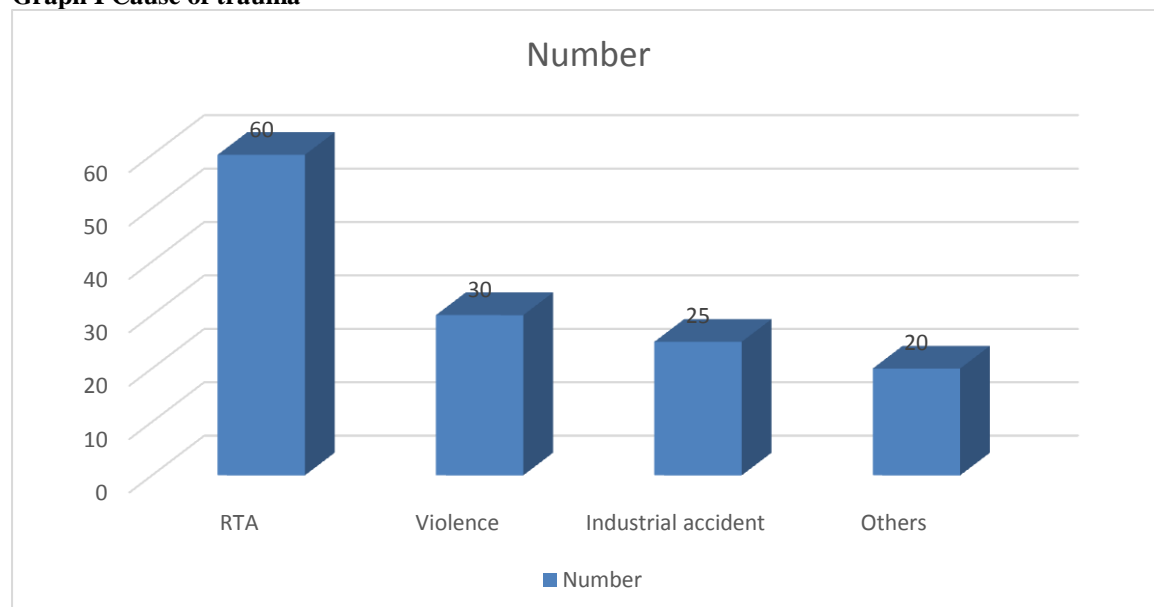
Injuries	Number	P value
Mandibular	30	0.05
Dentoalveolar	45	
TMJ	10	
Zygomatic- temporal	13	
Maxillary	15	
Soft tissue injuries	12	

Table III shows that common injuries were mandibular in 30, dentoalveolar in 45, TMJ in 10, zygomatic- temporal in 13, maxillary in 15 and soft tissue injuries in 12 cases. The difference was significant ($P < 0.05$).

DISCUSSION

The face is the most exposed part of the body and is particularly prone to injury, and these injuries are often associated with psychological trauma.⁶ The epidemiology of maxillofacial injuries varies between and within countries and depends on social conditions, standards of traffic management, and the nature of the terrain.⁷ It has also varied over time. Road traffic accidents have been reported to be the main cause of serious maxillofacial injuries in many studies worldwide.⁸ The number of road traffic accidents involving young adults may be high because people in this age group sometimes drive aggressively and carelessly, and may want to show off. Many use vehicles to get to work, social activities, or college.⁹ The present study was conducted to assess cases of traumatic maxillofacial injuries. In present study, out of 125 patients, males were 70 and females were 55. Weihsin et al¹⁰ retrospectively evaluated data on 4455 patients (aged between 3 and 84 years) who presented with maxillofacial injuries to a tertiary referral hospital. Of these, 18 needed only rest and medication so 4437 were included. Around one-third were aged between 21 and 30 years, and the male to female ratio was 5:1. The main causes of injury were road traffic accidents ($n = 2347$, 53%) and interpersonal violence ($n = 1041$, 23%). Most road traffic accidents involved two-wheeled vehicles. Alcohol was associated with 11% of injuries. A total of 2546 patients (57%) had mandibular fractures.

Graph I Cause of trauma



We found that cause of trauma was RTA seen in 60, violence in 30, industrial accident in 25 and others in 20 cases. Prasad et al¹¹ conducted the retrospective study on 153 maxillofacial trauma patients. Type, cause, and age-wise distribution of the injuries and the influence of alcohol on the injuries were assessed. Majority of the victims were males and from 20 to 30 years age group. Road traffic accidents were found to be the major cause (74%) and out of that 67% occurred under the influence of alcohol consumption and 85% cases were grievous. Injuries to teeth were found more common in the younger age group, and injuries to soft tissue were found more common in elderly persons. Influence of alcohol has been found to have a strong association with the severity of injuries ($P < 0.05$).

We found that common injuries were mandibular in 30, dentoalveolar in 45, TMJ in 10, zygomatic-temporal in 13, maxillary in 15 and soft tissue injuries in 12 cases. Problems such as bigger families, uniparental families, lack of proper schooling, low per capita income, and increased number of school dropouts, unemployed youth, force the people to take up jobs with the poor working environment, long working hours, and less pay. They become victims of easy humiliation and exploitation. Hence, they often resort to habits like alcohol or drug abuse as a temporary relief from stress. In such a lifestyle people do not give preference to any of the safety measures, thus exposing themselves to traumatic accidents. Many similar studies earlier have also proved this relation between the etiologic factors, the pattern of maxillofacial injuries and the socioeconomic status of the people.¹²

CONCLUSION

Authors found that most common cause of trauma was road traffic accident and site was dentoalveolar region.

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