

## Patterns & Predilections of Maxillofacial Trauma at a Teaching Hospital in North India (Kanpur)

G.B.Vinit\*  
Pranav Parashar\*\*

### ABSTRACT

During the five year span i.e. June 2006- June 2010, a total of 128 patients with maxillofacial trauma were seen at Rama Dental Hospital & Research Center, Kanpur, of whom 82.81% were males & 17.19% were females, 78.12% predominantly involved mandible while only 4.54% involved mid-third face fracture. Road traffic accidents accounted for about 51.56% while assault cases comprised of 41.93%. Fall from height accounted for 5.37% of total no. of cases. The Male (n=105): females (n=23) ratio was 5:1. Seasonal variation was prevalent with increased incidence of maxillofacial trauma during rainy season (July- September) & on Indian weekends (Saturdays & Sundays) the incidences were very high.

**Key words:** Road traffic accident, Alcohol consumption, Regional transport office, Maxillofacial Injuries and Intermaxillary Fixation.

### INTRODUCTION

Kanpur is one of the major industrial cities of north India, which consists of all classes of people. The population of city is very high, with a density of 1366/km<sup>2</sup>

Every year about 700 people die on the roads of Kanpur due to Road Traffic Accidents. The

main mode of transport is by "sharing autos"\*, which almost always is overcrowded flouting all the rules imposed by Regional Transport Office. The two wheeler riders, mostly youngsters don't wear helmets & it is not a rule strictly imposed by the law in this state of the Country. This city is also known for its busy political activities, poverty & unemployment, all of which contribute to high rate of crime in the city. Assaults due to ancestral property disputes, political rivalry & land encroachments to mention a few are also some of the attributing factors.

\*Sharing Auto (A three - wheeler that can normally accommodate 08 passengers)

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**Author's Affiliation:** \*Prof & Head Dept of Oral & Maxillofacial, Surgery, \*\*III year PG Student. Rama Dental College Hospital & Research Centre, A 1/8, Lakhanpur, Kanpur - 208024 (U.P.).

**Reprint's request:** Dr. G.B.Vinit, M.D.S., Professor & Head, Dept. of Oral & Maxillofacial, Surgery, Rama Dental College Hospital & Research Centre, A 1/8, Lakhanpur, Kanpur - 208024 (U.P.). E- Mail : gb\_vinit@rediffmail.com.

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## PATIENTS & METHODS

We studied the records of all the patients referred to our department in the past 5 years from June 2006 - June 2010 for the treatment of maxillofacial injuries including minor soft tissue & dental injuries. We studied all the case reports from patient's inpatient files & operation theatre registers & procured all the necessary records of maxillofacial injuries which were treated in the above said period. We analyzed age, sex, type & site of fracture, etiology of fracture & the type of treatment patient received.

## RESULTS

Of the 128 patients of maxillofacial injuries during 5-year period of study, highest incidence was among 21-30 year age group & lowest incidence in 61-80 year age group. Males dominated with (82.81%). Mandibular fractures (78.12%) recorded highest. The most common etiology was road traffic accidents (RTA=51.56%) & assault (41.93%). Maximum number of patients got open reduction & internal fixation under general anesthesia (81.25%) as this was the preferred treatment of choice.

## DISCUSSION

The etiology of fracture of facial bones varies from country to country & from one region to another in the same country. Studies in past have shown that road traffic accidents is the most common cause of facial injuries throughout the world, but it seems to have been overtaken in the past few decades by interpersonal violence in developing countries like India, Srilanka & Asian subcontinent, as its incidence ranks marginally below (41.93 %).

In this city Kanpur, about 400 deaths on roads were recorded in the year 2006, which increased to 560 deaths in the year 2010.

In our study we found that road traffic accidents (51.56%) are still the predominating etiological cause, but assault cases due to interpersonal violence (41.93%) was not far behind with 41.93%. If prevailing social & civic conditions remain the same it wouldn't be too late when the incidence of assault and interpersonal violence would precede the incidence of maxillofacial trauma.

We used intermaxillary fixation or closed reduction (6.25%) as mode of treatment in undisplaced type of fracture, but in displaced & comminuted fracture open reduction & internal fixation (81.25%) under general anesthesia was the preferred treatment of choice.

The incidence of maxillofacial injuries from assault & interpersonal violence in this part (41.93%) is relatively higher as compared to other parts of the country.

While stricter implementation of law & order with emphasis to strictly following of road traffic rules is of utmost priority in this region, we health professionals & citizens along with police, Regional Transport Office officials & administration with Non Government Organizations need to work together in this endeavor to drastically reduce the incidence of RTA & interpersonal violence.

Another important aspect of our study is alcohol consumption (25%) where in 1/4<sup>th</sup> of all the cases suffered from maxillofacial trauma gave positive history of alcohol consumption. This major contributing factor was directly proportional to interpersonal violence and RTA. It needs to be looked at and introspected. Interestingly high alcohol consumption has also been reported to be related to facial injuries in developed countries like U.K. (39%) & Norway (54%). It has also been reported in U.S.A. (59%), Greenland (90%), and Nairobi (74%).

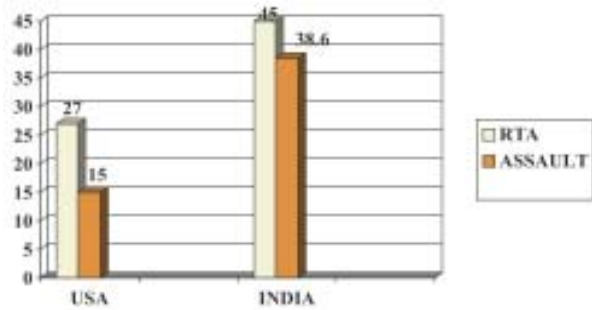
In developing countries, a host of reasons like socioeconomic circumstances, social behavior, work attitude, modes of transportation, driving skills, legislation, and consumption of alcohol, all play a role in establishing a prevalence of maxillofacial trauma.

Retrospective studies of maxillofacial injuries help in pointing out the major etiology & thus help not only in its prevention but also in quantifying the demands for services.

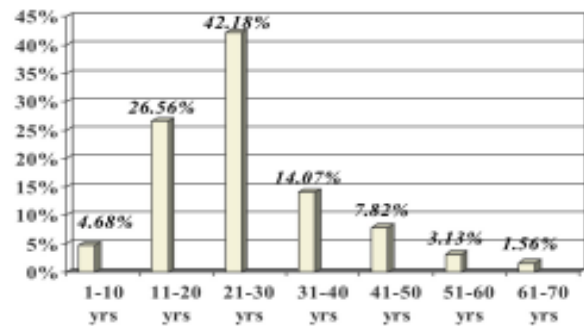
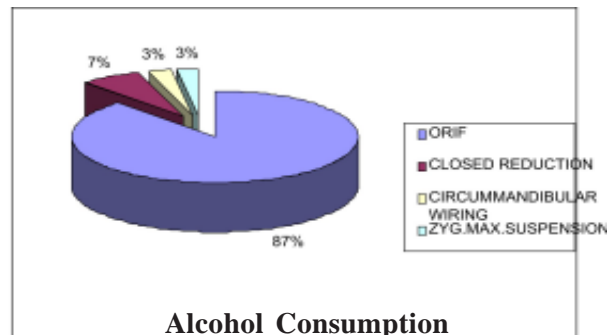
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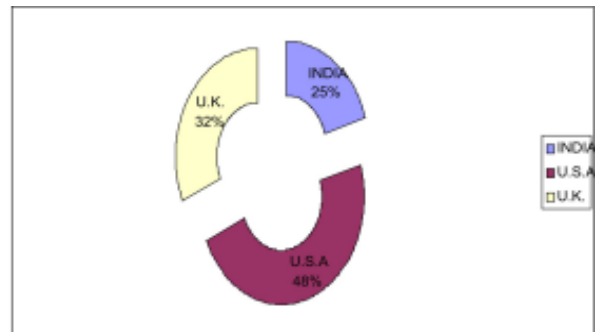
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**Type Of Treatment Received**



**Alcohol Consumption**



**Fracture Sites Involved**

