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An analysis of mandibular fractures epidemiology.

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ABSTRACT:

Background- Mandibular fracture is the second most common facial injury after nasal bone fractures.

Methods- This was a cross sectional study of patients presenting successively with mandible fractures, attending the Department of dental and Radiology.

Results- The causes of mandibular fracture were varied however, the main causative factor was two wheeler accidents (70.00%). Falls were the second most frequent cause of fracture (16.66), followed by injuries from car accidents (13.33%).

Conclusion- The causes of mandibular fracture reflect trauma patterns within a wide range of social settings.

Keywords- Mandibular, Fractures, Epidemiology

INTRODUCTION:

Mandibular fracture is the second most common facial injury after nasal bone fractures[1]. The only mobile cranial bone the mandible is vulnerable to fractures though it is the largest and strongest facial bone. The large variability in reported prevalence is due to a variety of contributing factors, such as the sex, age, environment and socio-economic status of the patient, as well as the mechanism of injury. For each patient, the combination of these factors determines the pattern of a mandibular fracture. A clear understanding of the demographic patterns of mandibular fractures will assist surgeons to plan and manage these injuries. Such epidemiological information can also be used to guide the future funding of public health programs geared toward prevention[2].

Etiology of mandible fracture have an extremely variable incidence depending on social, geographic and economic characteristics. The causes have been variably reported from road traffic accidents to sports activities, assault. Road traffic accidents are reported to be the leading causes of mandibular fractures in India.[3]

Materials and methods

This was a cross sectional study of patients presenting successively with mandible fractures, attending the Department of dental and Radiology. Most of the patients were referred from a nearby Trauma center which was referred for dental evaluation. Patients who had refused to participate in the research or who had inadequately completed the form were excluded.

Results

The results obtained were analyzed using frequency distribution. 30 patients aged between 12 to 65 years were mandibular fracture during the study period. The prevalence

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of mandibular fracture was higher in males (80%).

Table 1: Mechanism of injury

Mechanism of injury	No. of patients	Percentage
Two wheeler accidents	21	70.00
Fall	5	16.66
Four wheeler accidents	4	13.33
Total	30	100.00

The causes of mandibular fracture were varied, however, the main causative factor was two wheeler accidents (70.00%). Falls were the second most frequent cause of fracture (16.66), followed by injuries from car accidents (13.33%).

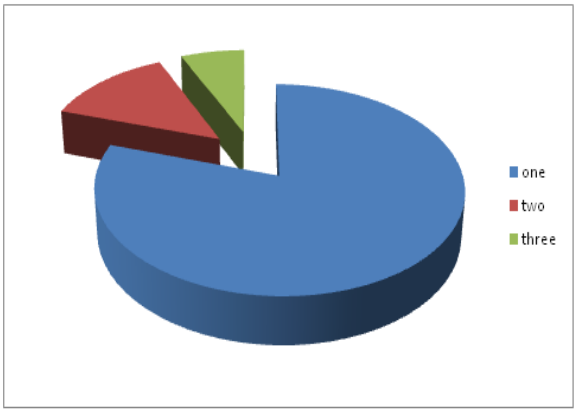

Fig.1: distribution of patients according no. of fracture

Out of the total number 30 mandibular fracture, 24 patients had only one fracture, while 4 patients had two fractures and 2 patients had three fractures.

Discussion

The prevalence of mandibular fracture was higher in males of all age groups, with an overall male-tofemale ratio of approximately 4:1. Most studies have also shown a lower incidence of maxillo-facial fractures in women [3,4], with the highest prevalence of fractures occurring in the third decade.

Higher incidence of use of two wheelers, lack of safety measures in the form of helmets and improper road conditions, could be the possible factor in this age group. It has also been consistently shown that the frequency of mandibular fracture among males is far greater than that for females.

There is a significant difference in the etiology of maxillofacial trauma in developing and developed nations. The common cause of maxillofacial trauma in developing countries is road traffic accidents, while assault is the most common cause in developed countries. Our findings also support the same, as 83.33% of our patients; road traffic accidents were the cause of injury.

Conclusion

The causes of mandibular fracture reflect trauma patterns within a wide range of social settings. Their causes often reflect shifts in trauma patterns over time.

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