



THE PATTERNS OF MANDIBULAR FRACTURE AMONG THE POPULATION IN ASSAM

Dental Science

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ABSTRACT

Assam has undergone steady economic and social transformation, leading to changes in patterns and severity of maxillofacial fractures and their causes. In our study we will determine the frequency of mandibular fractures, examine the contributory role, incidence, modalities of treatment rendered and also post injury complication rate.

KEYWORDS

Social, Frequency, Complication.

INTRODUCTION

Each year patients are admitted to hospital with facial trauma (Tanrikula, 1997) with mandible being one of the most common maxillofacial bones fractured ranging from 36% to 70%/.

- Studies around the world have shown the road traffic accidents (RTA) have been reported as a leading cause of mandible fractures in many developing countries (Khalil & Shaladi, Adekeye, 1980) where the tradition and enforcement of high way discipline are yet to be established or when.
- Moreover these injuries are very demanding of the public health care system. Each year more patients are admitted to hospital with facial trauma (Tanrikula 1997). (Azevedo et al. 1998) reported that annual hospital charges for mandibular injuries are quite considerable even in American standard.
- Knowledge of the pattern of mandibular fracture is critical to effective prevention and in the establishment of accurate trauma evaluation protocols. Second the injury patterns as they occur with mandibular fracture due to specific mechanism should be identified. Finally significant relationship between sample data and population characteristics must be sought.
- Very few published studies and little information are available on the relative incidence and characteristic patterns of mandibular fracture in Guwahati, Assam.
- The purpose of this study is to report on the pattern of occurrence of mandibular fracture in this part of India, and the various factors that influence their distribution.

MATERIALS & METHOD

The study was undertaken in department of Oral and Maxillofacial Surgery, Regional Dental College, Guwahati, Assam.

It was a prospective study of 179 patients who presented to out patient clinic from July 2007-September 2009.

In this study, a complete history was taken after stabilization of the patients.

- A clear description of the events leading up to the trauma was obtained from the individual or attendant.
- History included mode of injury, pain, trismus, difficulty chewing, sense of malocclusion and anaesthesia or paresthesia of the lower lip and chin.
- A complete medical and psychiatric history was taken.
- History of bone disease, neoplastic, arthritis, collagen vascular disease or endocrine disorders, nutritional and metabolic disorders was taken as it can affect treatment outcome.

- History of previous mandibular trauma was taken to help prevent misdiagnoses.
- Any pretraumatic temporomandibular joint dysfunction was documented in detail prior to treatment.
- Systemic medical conditions were appropriately evaluated.

RESULTS AND OBSERVATION

From July 1, 2007 to September 30, 2009 179 patients with 259 different types of mandibular fractures were evaluated.

Table 1; Age and gender distribution

Age (yrs)	Male	Female	Total	Percentage (%)
0-10	3	1	4	2.23
11-20	27	5	32	17.88
21-30	73	7	80	44.69
31-40	40	4	44	24.58
41-50	14	0	14	7.82
51-60	3	0	3	1.68
61-70	2	0	2	1.12
Total	162	17	179	100.00

Patients with mandibular fracture ranged in age from a 4-years-old male to a 70years-old male who was a victim of RTA. There were 162 males and 17 females accounting for the total of 179 patients.

The majority of mandibular fracture for both males and females occurred in the age group of 21-30 years and the most frequent was 25 years. The lower in ranks were 0-10 year's. The least affected population was that of 60 years old or older.

Table 2 : Sex distribution

Sex	No	Percentage (%)
Male	162	90.50
Female	17	9.50
Total	179	100

The above total shows that from the 179 cases afflicted with mandibular fracture (162, 90.90%) were male and (17, 9.50%) were female. Male to female ratio being 9:1.

Table 3: Etiology of mandibular fracture

Etiology	No of fracture	No. of Percentage (%)
RTA	137	76.54
Physical/violence	15	8.38

Falls	11	6.15
Gunshot wounds	6	3.35
Sports (cricket)	4	2.23
Work related	3	1.68
Animal attack	3	1.68
Iatrogenic	0	0.00
Total	179	100.00

The above table shows that the causes of mandibular fracture were varied however the primary causative factors were RTA (137)176.57%) Bodily assaults were the second most frequent cause of fracture (15.8.38% followed by injuries from falls (10,6.15% Gunshot wounds (6,.35%) Sports injuries accounted for (4,2.23%) Work related and animal attack each accounted for (3.1.68% each.

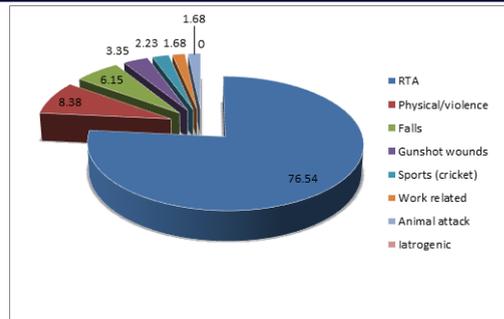


Fig 5 : Pie diagram showing etiology in percentage

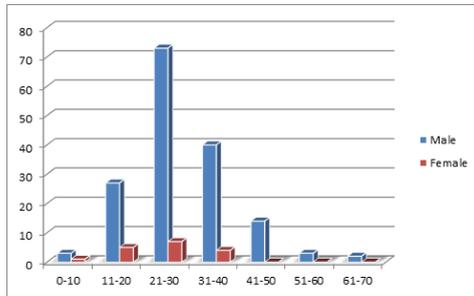


Fig 1: Bar diagram showing age-distribution female & female cases

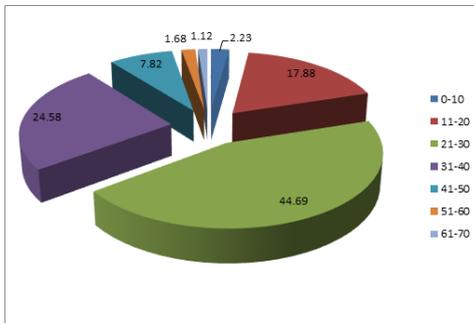


Fig 2: diagram showing age incidence in percentage

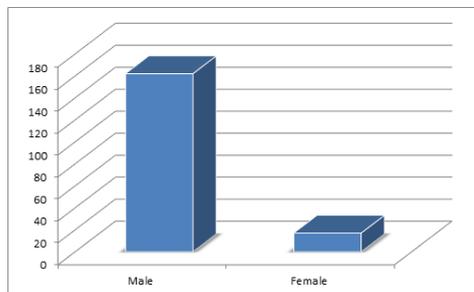


Fig 3: Bar diagram showing sex distribution

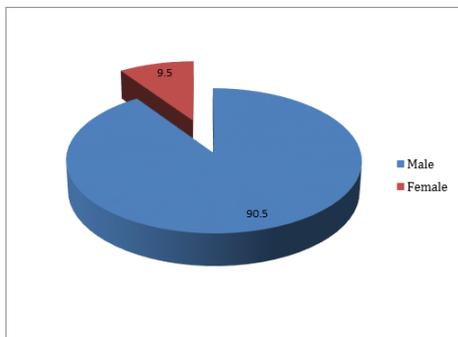


Fig 4: Pic diagram showing sex distribution percentage

CONCLUSION & SUMMARY-

The epidemiological profiles are of fundamental importance to the deep knowledge of the problem, allowing imposition of preventive measures and appropriate treatment.

Data on trauma and its complications is important for every country,as it helps in planning and improving facilities as well as in creating laws and public health initiatives that prevent and reduce trauma.

The results obtained in our institution seem to indicate that closed methods of treatment may still provide acceptable results.

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