

Evaluation of Mandibular fractures in the Kashmiri population

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Abstract: The second most common facial fracture is mandible fracture. The number of cases of mandibular fracture has been increased in recent years with the advent of fast moving automobiles. The objective of the present study was to study the pattern of mandibular fractures, the etiology, gender distribution and type of mandible fracture present in maxillofacial region in a known population.

Material and methods: The study was conducted to examine 130 patients of facial trauma of age group 18-58 years. The patients were examined for cause of trauma, gender and type of mandibular fracture. The patients were informed about the study and a proper consent for the same was obtained. A thorough clinical examination was carried out and necessary radiographic imaging was recorded. The variables studied were age, sex, type of facial fracture and etiological factor of injury.

Results: In our study 57.69% were males and 42.30% were females in which about 65.38% had suffered fracture due to Road Traffic Accidents, followed by 17.69% by assaults, and 12.30% due to fall, 2.30% patients reported with fractures had underlying pathology and 1.53% patient reported with fracture due to extraction, 0.76% patients reported with gunshot injuries. 56.15% patients had mandibular fractures out of which 17.8% had parasympheseal fractures.

Conclusion: Our study concluded that incidence of road traffic accidents was very common. Therefore, necessary traffic regulations are very important to bring down the frequency of road accidents.

Keywords: Mandibular fracture, parasymphysis fractures, maxillofacial region.

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I. Introduction:

Mandibular fractures comprise most of the traumatic injuries, which are treated by an oral and maxillofacial surgeon. The facial area is one of the most commonly fractured site of the body, ¹⁻³ of which mandible is the most frequent. ^{1,4,5} Injuries of the maxillofacial area can be psychologically disturbing for patients with a functional impact. ⁶ The fracture is defined as "breach in the continuity of bone". ⁷ Facial area is one of the most frequently injured area of the body, accounting for 23-97% of all facial fractures. ⁸ Mandible is the only mobile bone of facial skeleton and there has been a significant increase in number of cases in recent years. It is embryologically a membrane bone and is more commonly fractured than the other bones of face. Mandibular fractures occur twice as often as midfacial fractures. ⁹ The energy required to fracture it being of the order of 44.6-74.4 kg/m, which is about the same as the zygoma and about half that for the frontal bone. ¹⁰⁻¹³ It is four times as much force is required to fracture maxilla. ¹⁴ The objective of the present study was to study the pattern of mandibular fractures, the etiology, gender distribution and type of mandible fracture present in maxillofacial region in a known population.

II. Material And Methods:

The study was conducted to examine 130 patients of facial trauma of age group 18-58 years. All the patients were taken from the OPD in the department of oral medicine and radiology, Govt Dental College, Srinagar from August 2017 to August 2018. The patients were examined for cause of trauma, gender and type of mandibular fracture. The patients were informed about the study and a proper consent for the same was obtained from them verbally and in written format. An ethical clearance for the same was sought from the ethical committee. A thorough clinical examination was carried out in all the patients and necessary radiographic imaging was recorded. At least two radiographs at right angles to each other were advised to rule out fracture. The indirect fractures of the mandible are common due to force and fulcrum variation, it is recommended to take radiograph of both the sides to rule out fracture. The variables studied were age, sex, type of facial fracture and etiological factor of injury.



Figure 1- showing mandibular parasymphysis fracture.

III. Results

In our study 57.69% were males and 42.30% were females in which about 65.38% had suffered fracture due to Road Traffic Accidents, followed by 17.69% by assaults, and 12.30% due to fall, 2.30% patients reported with fractures had underlying pathology and 1.53% patient reported with fracture due to extraction, 0.76% patients reported with gunshot injuries. 56.15% patients had mandibular fractures out of which 17.8% had parasymphyseal fractures.

Table 1: Distribution according to gender

Gender	No. (%)
Male	75 (57.69%)
Female	55 (42.30%)
Total	130 (100%)

Table 2: Etiology of fractures

Etiology	No. (%)
Road traffic accidents	85(65.38%)
Falls	16(12.30%)
Assaults	23(17.69%)
Gunshot injury	1(0.76%)
Miscellaneous(due to extraction)	2(1.53%)
Underlying Pathology	3(2.30%)

Table 3: Type of facial injury

Mandibular fractures	73(56.15%)
Other facial injuries	57(43.84%)

Table 4: Type of Mandibular fractures

Symphysis	5(6.84%)
Parasymphysis	13(17.80%)
Angle	11(15.06%)
Body	6(8.21%)
Condyle	3(4.10%)
Coronoid	1(1.36%)
Combination of mandibular fractures	34(46.57%)
Total	73(100%)

IV. Discussion:

The etiologic factors of facial fracture are variable and depend on regional and social characteristics as well as time periods. Many research reports have cited car accidents, external injuries, sports activities, and assaults as main etiologic factors of fractures.¹⁵⁻¹⁷

In our study 57.69% were males and 42.30% were females in which about 65.38% had suffered fracture due to Road Traffic Accidents, followed by 17.69% by assaults, and 12.30% due to fall, 2.30% patients reported with fractures had underlying pathology and 1.53% patient reported with fracture due to extraction, 0.76% patients reported with gunshot injuries. 56.15% patients had mandibular fractures out of which 17.8% had parasympheseal fractures.

Most frequent cause of fracture mandible in this study was Road Traffic accidents, which is in accordance with Luce *et al.*,¹³ Bataineh,¹⁸ Shah *et al.*,¹⁹ and Brasileiro and Passeri.²⁰

Many authors reported symphysis²¹ as the most frequently affected site whereas, others reported this to be mandibular body,^{2,13,18,22} angle²³⁻²⁵ and condyle.¹⁹

V. Conclusion:

Our study concluded that incidence of road traffic accidents was very common. Therefore, necessary traffic regulations are very important to bring down the frequency of road accidents.

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