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Original Research

Assessment of 100 mandibular fracture cases among known population

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ABSTRACT:
Background: The present study was undertaken for assessing 50 mandibular fracture cases among known population. **Materials & methods:** Complete clinical and demographic information about each patient was gathered from the data record files and entered into a master chart. In order to analyse the clinical site and pattern of injuries involving the mandible, retrospective radiological examinations of all patients were completed. The record files also yielded a detailed description of the clinical pattern of fracture cases. The SPSS software was used to assess all the results, which were recorded in a Microsoft Excel spreadsheet. **Results:** A total of 100 patients were evaluated. Majority of the patients belonged to the age group of more than 40 years. Mean age of the patients was 46.2 years. Body of mandibular was fractured in 20 percent of the patients while angle of mandible was fractured in 14 percent of the patients. Condyle was fractured in 31 percent of the patients while symphysis was fractured in 24 percent of the patients. **Conclusion:** Mandibular fractures are most common among middle aged malessymphysis, and condylar region.
Key words: Mandibular, Fractures

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INTRODUCTION

About 25% of maxillofacial fractures are caused by mandibular fracture. Personal violence is the main cause of the majority of mandibular fractures, which range from 11% to 36% of all fractures of the mandible. Personal violence/assault, car accidents, falls, and sporting activities are some of the causes of body fractures. Automobile accidents account for 43% of all causes, with assaults (34%), falls (7%), and sporting accidents (4%), respectively. According to numerous studies, the fracture of the mandible body accounts for around 29% of all mandibular fractures (with a range of 11 to 36%), followed by the condyle and angle.[1- 3] The most common maxillofacial fractures in children have been found to be condylar and body fractures. Males are more likely than females to sustain a body fracture. Mandibular body fractures typically happen between the distal end of the canine and an imaginary line that corresponds to the area of the masseter muscle's anterior attachment. Based on the anatomic location, the direction of the fracture line, the position of the teeth in relation to the fracture, and favorableness, they can be categorised.Mandibular fractures are uncommon in children under the age of six, likely because of the relative prominence of the forehead compared to the chin. When they do occur, they are often greenstick fractures.[4- 6] Hence; the present study was undertaken for assessing 100 mandibular fracture cases among known population.

MATERIALS & METHODS

The present study was planned with the aim of analysing 100 mandibular fracture cases among known population. Complete clinical and demographic information about each patient was gathered from the data record files and entered into a master chart. In order to analyse the clinical site and pattern of injuries involving the mandible, retrospective radiological examinations of all patients

were completed. The record files also yielded a detailed description of the clinical pattern of fracture cases. The SPSS software was used to assess all the results, which were recorded in a Microsoft Excel spreadsheet.

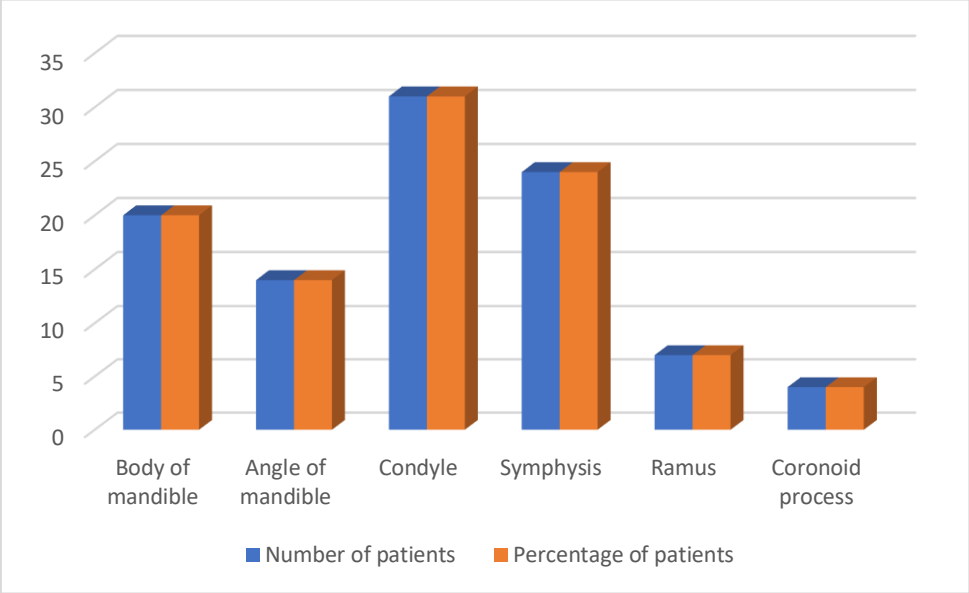
RESULTS

A total of 100 patients were evaluated. Majority of the patients belonged to the age group of more than 40 years. Mean age of the patients was 46.2 years. 78 percent of the patients were males while the remaining were females. Road traffic accident and fall from height were the major etiologic factors responsible for mandibular fractures. Body of mandibular was fractured in 20 percent of the patients while angle of mandible was fractured in 14 percent of the patients. Condyle was fractured in 31 percent of the patients while symphysis was fractured in 24 percent of the patients. Ramus and coronoid fracture was seen in 7 percent and 4 percent of the patients respectively.

Table 1: Location

Location	Number of patients	Percentage of patients
Body of mandible	20	20
Angle of mandible	14	14
Condyle	31	31
Symphysis	24	24
Ramus	7	7
Coronoid process	4	4

Graph 1: Location



DISCUSSION

The facial area is one of the most common sites of injury. The mandible is fractured more frequently than any other facial bone, likely because it is exposed and protruding. In addition to functional loss, a mandibular fracture can result in mild to moderate impairment or defect. Mandibular fractures are the most frequent type of fracture in the maxillofacial region. Mandibular fractures may occur alone or together with other facial bone fractures. The predicted ratio of mandible to zygomatic to maxillary bone fractures in patients experiencing maxillofacial injury is 9:4:1.The mandible is particularly prone to maxillofacial trauma because of its unique shape, mobility, and prominence in the facial skeleton. It is the second most common facial bone experiencing traumatic injuries, accounting for 15.5%-59% of all facial fractures. Patients with a broken lower jaw experience pain, difficulty chewing and talking, and esthetic disfigurement.[7- 10]Hence; the present study was undertaken for assessing 100 mandibular fracture cases among known population.

A total of 100 patients were evaluated. Majority of the patients belonged to the age group of more than 40 years. Mean age of the patients was 46.2 years. 78 percent of the patients were males while the remaining were females. Road traffic accident and fall from height were the major etiologic factors responsible for mandibular fractures. Body of mandibular was fractured in 20 percent of the patients while angle of mandible was fractured in 14 percent of the patients. Rashid, Sahd et al assessed patterns of mandibular fractures and associated comorbidities. The 138 patients diagnosed with mandibular fractures

in 2015 included 108 men (78.3%) and 30 women (21.7%), with a male preponderance of 3.6:1. Most patients (56%) were aged 15-25 years, followed by those aged 26-35 years (26%). The most frequent cause of fractures was road traffic accidents (RTAs; 59.42%), followed by falls (18.8%). RTAs were predominant in men (89%); whereas, falls were predominant in women (80%). Fractures due to firearm injuries and interpersonal violence were more frequent in men ($p < 0.001$). In patients with unilateral fractures, the most common fracture site was the parasymphysis (24.6%) followed by the symphysis (10.1%). In patients with bilateral fractures, the most common fracture sites were the parasymphysis and condyle (11.6%), followed by the parasymphysis and angle (8.0%).[11]

In the present study, condyle was fractured in 31 percent of the patients while symphysis was fractured in 24 percent of the patients. Ramus and coronoid fracture was seen in 7 percent and 4 percent of the patients respectively. Barde, Dhananjay et al attempted to delineate predictable patterns of fracture based on patient demographics and mechanism of injury in central part of India. They reviewed 464 patients having mandibular fractures with age ranging from 7 to 89 years. Male (343, 79%) to female (91, 21%) ratio was 3.7:1, significantly higher for males. The highest incidence (37.5%) of mandibular fractures was in the age group of 21–30 years. The main cause was road traffic accidents (RTAs, 68.8%) followed by falls (16.8%), assaults (11%) and other reasons (3.8%). Parasymphyseal fractures were the most frequent 331 (41.1%), followed by condyle (135) and angle (124) fractures in occurrence. Mandibular angle fractures were found mostly to be associated with assault victims.The mechanism of injury correlates significantly with the anatomic location of fracture and knowledge of these associations should guide the surgeons for appropriate and timely management.[12]

CONCLUSION

Mandibular fractures are most common among middle aged males at symphysis and condylar region.

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