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Research Article

**REVEALING THE VARIOUS CAUSES OF MANDIBULAR
FRACTURES**¹Dr. Kanwal Iftikhar, ²Dr. Maryam Zafar, ³Dr. Noveera Javed,
^{1,2,3}Nishtar Institute of Dentistry, Multan**Abstract:**

Objective: The aim of the study was to determine and reveal the causes of mandibular fractures, age groups and gender participation.

Study design: A retrospective study.

Location and Duration: In the Oral and Maxillofacial Surgery Department of Nishtar Institute of Dentistry, Multan for one year duration from November 2017 to November 2018.

Methods: The total number of patients with mandibular fractures was 268. The list of patients in the theater r book was initially compiled. The age range of the patients was between 2 and 70 years.

Results: Of the 268 mandibular fractures, 118 (44%) were the result of a traffic accident. Interpersonal violence was responsible for 67 cases (25%) and 43 cases (16%) from fall. We found that 35 (13%) patients were due to gunshot wounds and 5 patients (2%) were related to other injuries. 213 patients (79.4%) were male, so the ratio between females and males was 3.87: 1.

Conclusion: The result of this study shows that traffic accident is the most common cause of mandibular fracture.

Key words: Traffic accident, fracture of mandible, etiology.

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INTRODUCTION:

The history of the facial fractures is as old as the history of mankind. The mandibular is one of the most exposed bones of the face skeleton and is often traumatized. Etiology has always included traffic accidents, interpersonal violence, and especially primitive forms of war in ancient times. Over time, the battlefield has changed and other causes of mandibular fractures have been added to the list of traffic accidents, for example. The oldest reported literature is after the days of hypocrites and one of the best doctors of the middle Ages, namely: Abu-Ali Al Hysayn Ibn Sina (980-1037) west after the reduction of fracture stressed the correct congestion. Demographic data on mandibular fractures are difficult to assess due to many variables associated with the studies. Statistics on mandibular fractures are available in countries around the world. However, most are backward. Demographic data on maxillary facial injuries in English journals come mainly from the US, the UK, Germany, the Netherlands, and other well-represented countries in the world. Data from a large number of multinational industrial nations tend to show a large number of mandibular fractures showing severe non-traumatic injuries resulting from severe simultaneous facial fractures and maxillofacial injuries requiring extensive treatment. Statistics from smaller developing countries indicate that mandibular fractures are usually isolated, single, non-displaced and aggressive fractures and treated only by intermaxillary fixation. Thron and colleagues reported that 156 mandibular fractures in Greenland (90%) were related to interpersonal violence. Oslon et al. found that 48% of vehicle accidents were the cause of fractures, as in

the study of Ellis et al. vehicles accidents accounted for only 15% of fractures. The difference can be explained by the environmental and social characteristics of the studied town. However, very few mandibular fractures have been reported in this region. The aim of this study is to determine the common age group, sex and causes of mandibular fractures in Pakistan.

MATERIALS AND METHODS:

This retrospective study was held in the Oral and Maxillofacial Surgery Department of Nishtar Institute of Dentistry, Multan for one year duration from November 2017 to November 2018. The total number of patients with mandibular fractures was 268. A patient list was initially compiled from the operation theater book. This information was then confirmed by collecting the patient's name and hospital registration number and the files of all patients in the registry section of the Maxillofacial Surgery Unit. The collected data showed traffic accidents, interpersonal violence, falls, sports, shooting and other injuries. Oral and Maxillofacial Diseases and Surgery Unit and this unit takes patients from all regions and also patients from some parts of Punjab close to this hospital.

RESULTS:

For one year, 268 patients with mandibular fractures were treated. The age of the patients at the time of injury ranged from 2 years to 70 years with a mean age of 19.8 years. The majority (158) of the cases (58.9%) were between 10 and 40 years of age. The maximum incidences were between 2 and 10 years of age; this represented 72 cases (26.8%) of the sample.

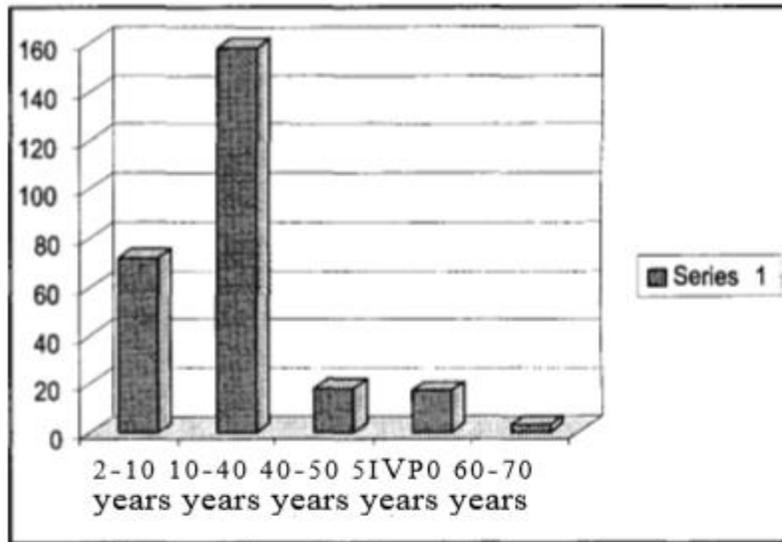


Fig 1. Shows the age groups of patients

The ages of the mandibular fractures decreased from 18 (6.7%) in 40 to 50 years, in 17 (6.3%) from 50 to 60 years, in only 3 (1.1%). 60 and 70 years. (Figure 1) 213 patients (79.4%) were male.

TABLE 2: SHOWS SEX DISTRIBUTION

No.	Male patients	Female patients
1	213	55

Therefore, the male / female ratio was 3.87: 1. (Table 2) The causes of mandibular fractures are listed in Table 1.

TABLE 1: SHOWS ETIOLOGY OF MANDIBULAR FRACTURES

Etiology	Patients	%age
RTA	118	44
IVP	67	25
Fall	43	16
G.shot	35	13
Others	5	2

The most common cause is traffic accidents. 118 cases (44%), followed by interpersonal violence 67 cases (25%) and fall related fractures 43 (16%),

gunshot injuries 35 (13%). In treatment of mandible fractures reduction and fixation methods were used. In 219 cases (81.7%) there was a near reduction.

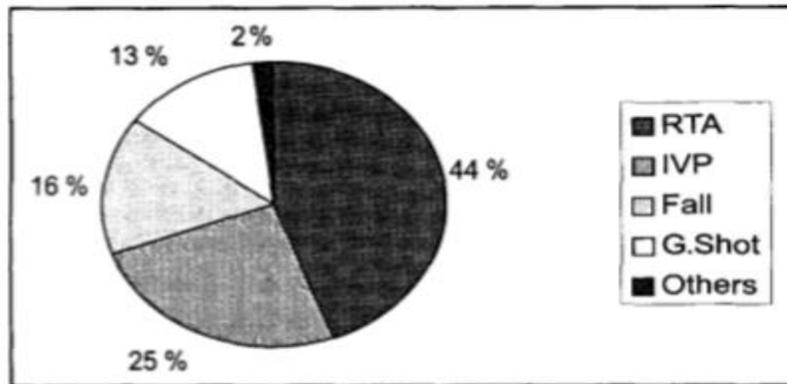


Fig 2. Shows the etiology of mandible fracture

The number of patients treated with inter-dental fixation with rings and fixation wires was 164 (61.19%) and 55 patients (20.5%) were treated with

arc rods and elastic or acrylic splints. Forty-nine patients (18.2%) were treated with intraosseous wiring and open reduction.

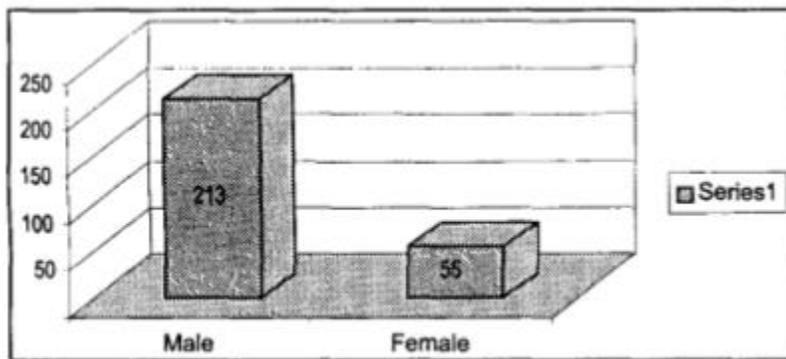


Fig 3. Shows sex distribution

DISCUSSION:

The results of epidemiological studies on the causes and frequency of maxillofacial fractures tend to vary according to geographical region, socioeconomic level, culture and age. Previous studies have shown that women are less affected by men, as proportion of women and men was 5.4: 1. Our study shows the same results up and down compared to the work of Vanttooff and Merx. The ratio of men and women is 3.87: 1. Most of the previous studies show traffic accidents as the most common cause of maxillofacial fracture. In our study, 44% (118 cases) of mandibular fractures were caused by traffic accidents that supported previous studies. In a study conducted in the same context in 1991, the decline was the most important cause of facial fractures. However, our study shows that traffic accidents are the main cause of jaw fractures. This shows that the causes of the fracture of the face skeleton have changed over time. The ratio in favor of men can be explained by the fact that most of these fractures are more likely to be

exposed to such hazards, as a result of traffic accidents, violence, falls and injuries with firearms. . The low rate of women in our study was due to the fact that women were not relatively active in the socio-economic life of Pakistan. The dominant age group in this study ranged from 18 to 40 years; The second to fourth decade men were the main group that made them more accessible, such as the main group, the most active life cycle, for example, social activities, work, sports, and fast transport. The etiology of facial fractures has changed and continues in the last forty years. The contemporary causes of facial fractures are interpersonal violence, sports injuries and traffic accidents and traffic accidents. Developed countries show a marked reduction in the broad traffic accidents category and the increased impact of interpersonal violence. This was not the case in our study. Traffic accidents were the most common cause of mandibular fractures. In our country due to traffic accidents in the high mandibular fracture, road users, lack of road feeling,

acceleration, underage drivers and slow moving vehicles on the road play a role. Like tractor trucks, poor conditions of vehicles, during loading and bad conditions of roads. In this part of the country, a large number of people from low socioeconomic groups use public transport. Vehicles are operated by drivers with a bad sensor of the road leading to accidents. This is one of the reasons for the high traffic accidents in our society. In advanced societies, drivers follow traffic rules more strictly. In addition, seat belt arrangements have also led to a reduction in traffic accidents. Interpersonal violence is a common cause of alcohol consumption in most developed countries. However, alcohol is legally and culturally prohibited in our country. Therefore, low interpersonal violence in our society. The large number of gunshot wounds recorded in this study was the result of tribal conflicts and lifestyles in Pakistan, where most people owned weapons.

CONCLUSION:

The result of this study shows that traffic accidents are the most common cause of mandibular fractures in this region. This is because the road users do not perceive on the road, the poor conditions of the vehicles, the increase in traffic load and the bad conditions of the roads. There is a need to continue the campaign to promote driving habits in a safe manner and in accordance with the rules. Seatbelt arrangements should be applied. This will reduce the incidence of facial fractures in underdeveloped countries.

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