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Research Article

**STUDY ON THE ETIOLOGY OF DENTOALVEOLAR  
FRACTURES IN DIFFERENT AGE GROUPS AND ITS MALE  
TO FEMALE RATIO**<sup>1</sup>Dr. Khadija Mushtaq, <sup>2</sup>Dr. Yasmeen Anwar, <sup>3</sup>Dr. Jabran Maqsood<sup>1</sup>de'Montmorency College of Dentistry Lahore/Punjab Dental Hospital, Lahore<sup>2</sup>Nishtar Institute of Dentistry, Multan<sup>3</sup>Punjab Dental Hospital, Lahore**Abstract:*****Purpose:** To determine causes of dentoalveolar fractures and age and sex distribution.****Study Design:** A Descriptive Study.****Place and Duration:** The study was performed in the Dentistry and Facial Surgery Department of Nishtar Hospital, Multan for the period of Six months from July 2017 December 2017.****Methods:** One hundred patients with dentoalveolar fractures were selected for the period of six months. In this study, the age range is 3-60 years and the average age is 18.17; and Std Deviation 13.08.****Findings:** The male to female ratio was 2.7: 1. The most important cause of dentoalveolar fractures was Traffic accidents (39%), followed by sports accidents (15%), falls (30%), work accidents (4%), violence (5%), horseshoeing (2%) and firearm injuries (4%).****Key words:** fractures, tooth trauma, sex, age.***\* Corresponding author:****Dr. Khadija Mushtaq,**  
de'Montmorency College of Dentistry,  
Lahore/Punjab Dental Hospital,  
Lahore

QR code



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**INTRODUCTION:**

Dentoalveolar fracture (FAD) is quite common and is usually considered urgent. A dentoalveolar fracture can be defined as a fracture involving subluxation, displacement, fracture or avulsion of the teeth associated with the alveolar fracture. The alveolar process is the jaw part that surrounds and holds the jaws and teeth. The alveolar process occurs with the development and bursting of the teeth and, conversely, decreases gradually after the loss of the teeth. Trauma to the oral area is frequent and accounts for 5% of all injuries. Before school age approximately 50% of children are exposed to tooth trauma.

**MATERIALS AND METHODS:**

This descriptive study was performed in the Dentistry and Facial Surgery Department of Nishter Hospital, Multan for the period of Six months from July 2017 December 2017. The study period consisted of 100 patients with six-month-old densoventral lesions.

Patients with crown defect, concussion, uncomplicated crown fracture and isolated soft tissue injuries were excluded from the study. The written approval of the patients or their assistants was obtained by proforma. Clinical examination is performed on each patient. Periapical radiographs were taken from each patient and orthopantomograms were taken when deemed necessary.

**RESULTS:**

Hundreds of dentoalveolar fractures were included in this study to know the age, etiology and gender distribution. 3-60 years was the age range and the average age is 18.17 (standard deviation 13.08). The general distribution of age was highest in the first decade of life (36%), in the second decade (35%) and after the second (3.), ie 71% of the patient population in the first and second decades of life and 84% has emerged before the age of 30. (Table 1).

TABLE 1: SHOWS PERCENTAGE OF DENTOAL-VEOLAR FRACTURE YEARWISE

Age of patients	No of Patients	Percent-age
1—10 yrs	36	36%
11—20 yrs	35	35%
21—30 yrs	13	13%
31—40 yrs	7	7%
41—50 yrs	6	6%
51—60 yrs	3	3%
Total	100	100%

DAF was more common in males (73%) than in females (27%). There was a male-female relationship (2.7: 1). (Figure 1).

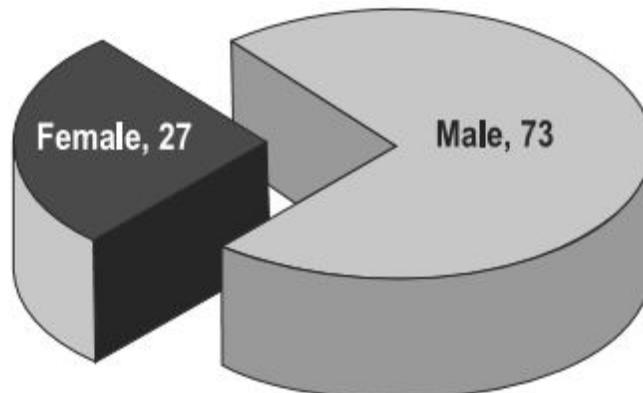


Fig 1: Shows the number of patients effected gender-wise

Traffic accidents (ACR) were the main causes of DAF (39%) followed by the fall (31%).

Non-organizing games (8%), sports accidents (7%), violence (5%), work accidents (4%) and firearm injuries (4%).

(Table 2).

TABLE 2: SHOWS THE ETIOLOGICAL FACTORS

Causes	No of Cases	Percentage
R.T.A	39	39%
FALL	31	31%
Unorganized Playing	8	8%
Sports	7	7%
Violence	5	5%
WORK	4	4%
Accidents		
Fire Arm Injuries	4	4%
HORSE Kick	2	2%
<b>Total</b>	<b>100</b>	<b>100%</b>

Traffic accidents were 71.4% in the 1st and 2nd decade, 76% of the decline was in the 1st and 2nd decade.

### DISCUSSION:

Dentoalveolar fractures are more frequent and severe in the youngest age group. The incidence of maximal tooth injuries is between 18 and 23 years. Many other studies show that the most sensitive period for the emergence of childhood facial trauma and the maximum age is 8 years. The result of this study is consistent with previous studies and shows that the incidence of DAF at 3 to 10 years is higher. Oikarinin explains that when injured little boys hit their bodies with objects, they do not have enough motor coordination to bring down the most. This study also showed that the incidence of dentoalveolar trauma was higher in patients (35%) who ranged from 11 to 20 years, and this was reported by Da Silva<sup>13</sup> and Zuhail *et al*. This study shows the tendency for trauma to occur in school-age patients, possibly as a result of more play activities of these individuals. This can also be attributed to an increase in physical activity and unrestricted sports in this age group. The results also agree with the findings and suggestions that Ogunlewe and Oji C. made changes in the mature facial anatomy of children as they grow older, making them more susceptible to orofacial fractures. In addition, children over the age of 12 tend to be more independent and participate in more social activities with less parental protection. Children have more traumatic tooth fractures (22.4%) than girls (12.6%). According to Gassner, the male-female relationship is 3.3: 1. In this study, the male-female

relationship is 2.7: 1. This difference in gender distribution is supported by previous studies and differs from Gutmann<sup>21</sup>, which reports equal participation of men and women. While the description of these findings may be a historically active role played by men in society, women are often confined to their homes. In addition, girls are more mature than their behavior and tend to more active and open-air activities. According to the Nilatty studies in Turkey, the decline in all age groups (42.7%), stroke (18%), sports (16%) compared to the other most common etiologic factors such as dentoalveolar trauma is the cause. collision with an object (14.7%) and only traffic accidents (3.3%). According to the Han, the fall is the most common fracture breaker in Multan. In a Brazil study, the most common cause of dentoalveolar injury was the decline (72.4%) and traffic accidents (6.8%). Fall was the second most common etiologic factor representing 31% of the study population. The cause may be the exclusion of isolated tooth injuries in this study.

Unorganized play is the third common cause of DAF. Since Multan is a less developed city with a small number of playgrounds, children usually do not organize a sport, but usually run after others and there is a collision in DAF. In addition, many schools are located in very small houses without open spaces or playgrounds, so children have to play on cemented

floors. Participation in contact sports such as hockey, football, football and boxing may lead to a dentoalveolar chalk.<sup>26</sup> In this study, the sport-related DAF was 7%. Findings of other studies.<sup>24, 27</sup> This may be due to lack of contact sports such as skiing, ice-skating, rugby, football and wrestling. This study shows the severity (5%) as the etiologic factor. The severity of violence is lower than in Europe and the United States. This may be due to alcohol consumption, bars and casinos. In the DAF etiology, fire and arm injuries are seen in 4%. This may be due to the easy availability of weapons. This study shows that the social and educational status of a population is a strong influence on the aetiology of DAT. An interesting reason for this study was the horse attack, representing 2% of the etiology. They are all kochvandi (jumpers). The prevalence of injuries caused by animals is largely related to cultural factors, because the causes and incidence of maxillofacial injuries vary from country to country or from country to country. Horse-related injuries show a large percentage of craniofacial / maxillofacial trauma in a pediatric agricultural population.

### CONCLUSION:

The study shows that most of the patients are young. Men are more common than women. The most common etiological factor was traffic accidents, followed by autumn. In the light of this study, the following suggestions were made; To reduce the frequency of traffic accidents, traffic regulations and regulations must be strictly enforced, including the use of child safety systems, helmets, safety belts and safe pedestrian zones. Mouth protector should be mandatory during contact sports.

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