The Professional Medical Journal
www.theprofesional.com

DOI: 10.17957/TPMJ/16.3080

ORIGINAL PROF-3080

DENTOALVEOALR INJURIES;
AN AUDIT AT LIAQUAT UNIVERSITY HOSPITAL HYDERABAD

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Article received on:
28/07/2016
Accepted for publication:
20/09/2016
Received after proof reading:
14/11/2016

ABSTRACT… Objectives: To analyze frequency, gender, age distribution, cause of injury and type of dento alveolar injury among patients at Liaquat university hospital Hyderabad. **Setting:** This research done in Oral and Maxillofacial Surgery department at Liaquat University Hospital Hyderabad. **Period:** June 2013 to December 2014. **Material and Methods:** A data of 114 patients who had been suffered with dentoalveolar trauma was reviewed. Patients history including age, gender, etiology of injury, type of injury like (intrusion, extrusion, luxation, subluxation, avulsion, crown fracture, root fracture were analyzed. **Results:** 36 female patients and 78 male patients were affected with dentoalveolar trauma. The injury was frequent in age between 11-20 years. Mainly etiology of injury was fall in 54 cases followed by RTA in 35 cases. Intrusion of teeth was seen in 51 cases and crown fracture in 29 cases. **Conclusion:** The results of this study illustrate that fall is most common etiology of dentoalveolar trauma in this area. Intrusion of teeth was the most common types of dentoalveolar traumatic injury. Precautionary educational programs relating to traumatic dental injuries are required to be held in our country to reduce the number of such injuries.

Key words: Dentoalveolar, Trauma, Intrusion, Extrusion.

Article Citation: Article Citation: Hassan SG, Shahzad M, Panjabi SK, Shams S, Kumar A. Dentoalveoalr injuries; an audit at Liaquat University Hospital Hyderabad. Professional Med J 2016;23(11):1345-1348. **DOI:** 10.17957/TPMJ/16.3080

INTRODUCTION

Traumatic dental injuries are still a grand task in as much as they usually damage the teeth and their supporting tissues with an unfavorable prognosis that can lead to tooth loss.[1] Trauma to the oral areas occurs often and encompass 5% of all injuries for which people look for treatment.[2,3,4] Dentoalveolar trauma at present constitutes one of the main clinical situation requiring dental treatment.[5,6]

Facial trauma which cause in fracture, displacement, tooth loss can results significant negative esthetic, functional and psychological effects.[7,9,10] The causes of dentoalveolar injuries varies in different countries and even in one country depending on the existing socioeconomic, environmental and cultural factors. The diverse causes include falls, road traffic accidents, contact sports, interpersonal violence, child abuse, intellectual disorders, epilepsy, etc.[8,11,12] Fall is the most prevalent in children while road traffic accidents being the focal etiological factor in adults. The frequent dentoalveolar injuries are crown fracture, root fracture, intrusion, extrusion, luxation, subluxation, avulsion; these may be related with or without facial bone fractures.[13,14]

Proper early diagnosis and prompt management are the key features in saving the teeth of patients with dentoalveolar trauma.[15] Maxillofacial surgeons can evaluate the severity of the injury by performing clinical examination and radiolographs like periapical radiographs, occlusal radiographs and orthopantomograms.[16]

The dentoalveolar trauma in nature and complexity differ significantly. In majority of cases, early and appropriate management may lessen the stress of the patients and can progress the prognosis of case.[17] It is important that doctors should be well-known with the diverse types of injuries of teeth and supporting tissues, and must be able to manage such injuries, from emergency management proper clinical protocol for every kind of injury.

MATERIAL and METHODS

This eventual study conducted in the department of Oral and Maxillofacial Surgery at Liaquat University Hospital Hyderabad for a period of one and half year from June 2013 to December 2014. The data of 114 patients who had been affected with dentoalveolar trauma was recorded on proforma. The patient's age group, gender, cause of injury and type of injury (intrusion, extrusion, luxation, subluxation, avulsion, crown fracture, root fracture) were analyzed. These injuries were diagnosed both clinically and also with the help of radiographs like periapical views, occlusal views and orthopantogram (OPG).

RESULTS

Males	78
Females	36
Total	114

Table-I. Shows that there were 78 male patients and 36 female patients were affected by dentoalveolar trauma.

Age Group	No: of Patients with %
z1-10 Years	37 (32.46%)
11-20 Years	49 (42.98%)
21-30 Years	19 (16.67%)
31-40 Years	09 (7.89%)
Total	114 (100%)

Table-II. Shows that most common age group affected were 11-20 years.

Cause of Injury	No: of Patients with %
Fall	54 (47.37%)
RTA	35 (30.70%)
Assault	13 (11.40%)
Sports Injury	12 (10.53%)
Total	114 (100%)

Table-III. Shows cause of injury involved. Most common cause was fall followed by RTA

Type of Injury	No: of Patients with %
Intrusion	51 (44.74%)
Extrusion	03 (2.63%)
Crown fracture	29 (25.44%)
Root fracture	01 (0.88%)
Luxation	04 (3.51%)
Subluxation	05 (4.39%)
Avulsion	21 (18.42%)
Total	114 (100%)

Table-IV. Shows type of injury involved. Intrusion of teeth was found in 51 patients.

DISCUSSION

Trauma to the oral areas happens commonly and includes 5% of all injuries. Their severity depends on the potency of impact and direction of the causative agent, also on the resistance of the tissues surrounding the injured teeth.

Current study includes 114 patients of all ages and both the gender. In this study 78 patients were masculine and 36 patients were feminine with the ratio of 2.17:1. According to Gassner[15] male to female ratio is 3.3:1. Studies carried out in Iraq, Australia, United States have revealed that men experienced dental injuries twofold as often as women. The male: female ratio differs from 1.5:1.0 to 2.5:1.0. Such ratio could be accredited to a greater involvement of boys in contact sports, fights and car accidents.[23,24,25]

Conversely, some of the researches have exposed a decrease in the gender ratio that might be due to increased sports activities in girls.[26] In western countries, female contribute in all sports activities, including automobile races and radical sports.

In this study different age group are affected with dentoalveolar trauma but the second decade is most common age group affected with 49 cases (42.98%), this data is supported by Kelly O.George[22] 2012 Brazil. While this figure is opposite with study carried out by Sakai[20] et al in 2005 and Kumaraswamy SV[27] where they found 1st decade as most commonly affected.

Most common causes of dentoalveolar fracture are activities of daily life household accidents, sports, acts of violence, road traffic accidents and work accidents. Fall was the most common etiological factor of dentoalveolar fracture in this study with 47.37% cases. This is an agreement with the observations of other studies Silva AC[12] in Brazil 2004 and Rezende FM[13] in 2004, where they also found fall as the most common etiological factor.

RTA was the second most common cause in this study. MacGraw and Cole[18] reported that 42% of facial injuries in childrens were due to motor vehicle

accidents. Posnick[19] et al reported that 50% of the fractures resulted from road traffic accidents. This information also co-relates with comparable studies carried out in a variety of under developed countries where motor bikes are widespread and helmets, seat belts and traffic laws are not implemented.[6,12] In present study contact sports and interpersonal violence accounted for a very few percentage of dentoalveolar trauma. This result moreover alike to what is states from under developed countries and disagree with the results stated from advanced countries where contact sports and interpersonal violence constitute a chief etiological factor for dentoalveolar injuries.

In this study intrusion of tooth was most common dentoalveolar injury with 63 cases, followed by fracture of crown 31 cases and avulsion 10 cases, this is against the findings of Panzarini SR[21] in 2008. However, Silva AC[12] et al found luxation and avulsion as the most common dentoalveolar injuries. Rezende FM[13] reported that coronal/ crown-root fractures and Avulsions were the frequent types of traumatic dentoalveolar injuries, resultant to 20.4% and 19.7% of all cases surveyed, respectively which in contrast to our study.

CONCLUSION

The findings and figures of this study told that traumatic dentoalveolar injuries were mainly occurs in male patients and principally occurred in second decade of life, mostly due to falls. Intrusion of teeth was the most prevalent of dentoalveolar traumatic injuries. Traumatic dental injuries are documented as public dental health matter all over the world. Inclination to increase in frequency of dental traumas are because of great interest in sport activities can be pragmatic. Precautionary educational programs concerning traumatic dental injuries are required to be held in Pakistan to reduce the number of such injuries.

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3	Dr. Suneel Kumar Panjabi	Plagiarism check analysis and interpretation of data	
4	Dr. Salman Shams	Acquisition of data & Drafting of manuscript	
5	Dr. Anand Kumar	Data Collection	