

ORIGINAL ARTICLE

Knowledge and Attitude about Dental Trauma among House Officers of Dental Surgery

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ABSTRACT

Background: Dental trauma is trauma of teeth, periodontium and surrounding tissues. It occurs frequently in children and young adults. Traumatic injuries are one of the commonest injuries, it occurs at schools, homes, accidents or sports. The most common site of dental trauma is maxillary central incisors.

Aim: To assess the knowledge and attitude about dental trauma among house officers of dental surgery.

Methods: This cross-sectional survey was performed on house officers from four dental teaching hospitals of Islamabad, affiliated with Islamabad Medical and Dental College, Pakistan Institute of Medical Sciences, Rawal Institute of Health Sciences and Riphah University from September 2020 to February 2021. A self-administered questionnaire was used to assess the knowledge and attitude of house officers about dental trauma. Those who were not willing to participate and incompletely filled questionnaires were excluded. IBM-SPSS version 22 was used for data entry and descriptive analysis.

Results: Out of the 200 distributed questionnaires, 156 completed questionnaires were received so the response rate was 78%. Among 156 participants, 47 (30.1%) were male and 109 (69.9%) were females. Descriptive analysis of the knowledge showed that almost half of participants had good [n=82, (52.56%)] knowledge regarding dental trauma while house officers showed variable responses regarding their attitude toward dental trauma.

Conclusion: The percentage of house officers with good knowledge and attitude about dental trauma was relatively high and the percentage of the ones with poor knowledge was more or less the same.

Keywords: Attitude; Dentistry; House Officer; Knowledge; Surgery; Trauma.

INTRODUCTION

Dental trauma is defined as trauma to teeth, periodontium and surrounding tissues. It occurs frequently in children and young adults. Traumatic injuries are one of the commonest injuries with incidence ranging from 3.9% to 58.6%. It occurs at schools, homes, accidents or sports. The most common site of dental trauma is maxillary central incisors¹. Most of these injuries occur between 8 and 11 years². Dental injuries carry a significant role in individual tooth loss which is an important determinant of poor quality of life³. Traumatic injuries itself is not a disease but is a consequence of multiple factors that will accumulate throughout life if not properly managed⁴.

Dental injury is classified into enamel fracture, crown fracture with/without pulp involvement, crown-root fracture, luxation, avulsion and alveolar process fracture⁵. Avulsion is the most complicated type of all injuries and is considered as a dental emergency. Avulsion occurs at 0.5% to 16% in permanent and 7% to 13% in primary dentition and its timely management is important for tooth survival^{6,7}.

Dental trauma causes oral health problems affecting oral structures, teeth, soft tissues and alveolar bones which leads to pain and has a medical, social, psychological impact on a patient's quality of life. It affects the esthetics and phonetics of the patient.⁸ Suitable management and treatment plan is important for the success and good prognosis of trauma².

The treatment depends on the type, location and severity of each injury. Emergency care is necessary for a good prognosis. The more the treatment is delayed; the risk of bone resorption and de-vitalization of the tooth will be increased⁹. Treatment guidelines are important for dentists to provide proper and effective care for children during trauma. These guidelines are necessary to enhance awareness and exposure as well as to upgrade the information regarding dental trauma among dental students¹⁰.

This study is aimed to assess the knowledge and attitude of house officers about dental trauma, its type and its management accordingly. As most of the emergency treatment is provided by general dental practitioners, so they need to have an adequate level of awareness about the management of traumatic dental injuries. To date, a few studies have been done on this topic in Pakistan. This research will add to the literature available on this topic. This will help dentists to provide better care to trauma patients. This in turn will increase their confidence and practice towards its management and will also help in the improvement of its long-term and short-term outcomes.

MATERIAL AND METHODS

After approval from Institutional Review Board (IRB) of Islamabad Medical and Dental College (IMDC) Islamabad vide latter number IMDC/DS/IRB/166, this descriptive cross-sectional study was carried out from four dental teaching hospitals of Islamabad, affiliated with IMDC, Pakistan Institute of Medical Sciences (PIMS), Rawal Institute of Health Sciences (RIHS) and Riphah University

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from September 2020 to February 2021. A self-administered questionnaire was used to assess the knowledge and attitude of house officers about dental trauma. The questionnaire was composed of a total of 16 questions out of which 8 aimed at knowledge and 8 assessed attitudes. A pilot study was carried out for the reliability of the questionnaire through Cronbach's alpha test that yielded the value of 0.7. With a written informed consent, a total of 200 questionnaires were distributed in hard copy among house officers during their clinical sessions. Appropriate time was given to them to fill it. Those who were not willing to participate and incompletely filled questionnaires were excluded. Non-probability convenience sampling was done for the data collection.

The following procedure was used for evaluation the knowledge and attitude among participants: the responses were assessed as per the following criteria; out of 8 questions for knowledge, participants with 3 or less correct answers were given a poor knowledge score. Participants with 4, 5 or 6 correct answers were given a good score and participants with 7 or all correct answers were given an excellent score. Data collection done by giving questionnaire to the participants with their consent. Questionnaires filled after explain each and every question to the participant and serious marking about the options given below every question according to their knowledge.

All collected data was entered in SPSS version 22 and analyzed. The results were presented in the form of descriptive analysis. The qualitative variables were presented as percentages and quantitative variables as mean.

RESULTS

Out of the 200 distributed questionnaires, 156 completed questionnaires were received so the response rate was 78%. Among 156 participants, 47 (30.1%) were male and 109 (69.9%) were females. Institution participation showed, 41 (26.3%) were from IMDC, 35 (22.4%) from PIMS, 29 (18.6%) from RIHS and 51 (32.7%) from Riphah University. Descriptive analysis of the knowledge showed that almost half of participants had good [n=82, (52.56%)] knowledge regarding dental trauma

House officers showed variable responses regarding their attitude toward dental trauma. While 34.6% of house officers were confident that they can deal with the patient with dental trauma on their own, majority of them (55.4%), reported that they cannot. Only 41% of house officers were satisfied with their knowledge regarding dental trauma and its management, while 59% were not. Quite a less number of house officers (12.8%), have attended workshops regarding dental trauma management. The majority of house officers (72%) showed a positive attitude in response to the question that whether or not they can replant avulsed teeth inside a patient's mouth and 44.2% had treated patients with dental injury in their hospital. The majority of house officers (66.7%) knew the proper management of a tooth if it had fallen on the ground and 85.9% were aware that the tooth should be held by the crown instead of the root when cleaning it. When asked about the management of an intruded maxillary incisor in an eight-year-old child, the majority, about 38.5%, said they would treat it through passive repositioning (Table 1).

Table 3: Responses for attitude towards dental trauma

Question	Options	Frequency	%age
Can you deal with the patient of dental trauma on your own?	Yes	54	34.6
	No	102	55.4
Are you satisfied with your knowledge regarding dental trauma and its management?	Yes	64	41.0
	No	92	59.0
Have you attended any workshop regarding dental trauma management?	Yes	20	12.8
	No	136	87.2
Can you replant avulsed tooth inside patient's mouth?	Yes	72	46.2
	No	84	53.8
Have you treated any dental injury in your hospital?	Yes	69	44.2
	No	87	55.8
If the tooth has fallen on ground, would you?	Clean it	104	66.7
	Do not clean it	52	33.3
	By crown	134	85.9
If you decide to clean it, how would you hold it?	By root	22	14.1
	Active repositioning	30	19.2
	Combination of active and passive repositioning	40	25.6
If an eight-year-old is presented with moderate intrusion of maxillary left central incisor, what will be your preferred treatment option?	Surgical reduction	12	7.7
	Passive repositioning	60	38.5
	Combination of active repositioning and surgical reduction	14	9.0

DISCUSSION

It is important to increase awareness about traumatic dental injuries among house officers so that they are capable enough to deal with such patients in the future. Several similar studies had been carried out to assess knowledge of dental practitioners regarding dental trauma^{11,12}.

The results of the present study revealed that a high number of house officers had good command about dental trauma management, as also stated by Nandakumar et al¹³. Although, at the same time, there was also a relatively

high percentage of the ones with poor knowledge and similar results were reported in various previous studies^{1,14-16}. One of the reasons for insufficient knowledge of these house officers could be their lack of skills in trauma management, which implies the need for training in trauma management during their clinical sessions.

Results also demonstrated that there was a significant shortage of house officers who had attended any workshops regarding dental trauma management. This finding is inconsistent with Al-Shamiri et al². The reason for this could either be the lack of interest of these house officers in attending such workshops or due to the limited

number of workshops being organized in the respective dental colleges. Al-Shamiri also stated that very few dental students were confident about management of dental trauma, as is the case in the present study as the majority of house officers (55.4%) exhibited a lack of confidence in dealing with the patients of dental trauma on their own. This result is also in line with that of Siddiqui et al.³

Regarding the satisfaction of house officers about their knowledge of dental trauma, the ones with a negative response were more as compared to the ones with the positive response, similar to results of Siddiqui et al and Attarzadeh et al^{3,17}. This signifies their interest in learning more regarding dental trauma. However, a significant number of house officers were actually aware of proper management of tooth if it had fallen to the ground as 85.9% of them said that it should be cleaned and held by the crown, which is comparable to the result of Kumar et al but in contrast to Attarzadeh et al in which the percentage was only 16.7%^{5,17}.

Like various previous studies, present study also has some limitations. As the results of this study are based on responses of house officers from only four dental colleges, these cannot be generalized to all the dentists in either this city or even the whole country. There may also be a chance of reporting a bias as the house officers may not have answered correctly what they follow in their daily practice. Despite these limitations, some information is provided about understanding of house officers regarding dental trauma.

CONCLUSION

Although the percentage of house officers with good knowledge and attitude about dental trauma was relatively high, the percentage of the ones with poor knowledge was more or less the same. This highlights the need to increase awareness about dental trauma among house officers by arranging a variety of dental programs/workshops and encouraging them to participate in such programs, which will be beneficial for their professional lives in the future.

Authors Contribution: RB, ZQ & SD; provided concept/research design and did data collection, ZN, RTK: did statistical analysis and manuscript writing, MJ & RTK: did edit of manuscript and project management, MJ did critical revision of the manuscript for important intellectual content, ZN & MJ: take the responsibility and is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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