Knowledge and attitude of primary school teachers in emergency management of dental trauma: A cross sectional study

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Abstract

Background: School is one of the locations with greatest prevalence of traumatic dental injuries. School teachers form the group who commonly supervise the physical activities of school children. So, awareness about emergency management of dental trauma among primary school teachers is an important concept for long term maintenance of oral health.

Objectives: (a) To assess knowledge and attitude of primary school teachers in emergency management of dental trauma and (b), to impart knowledge regarding the emergency management of dental trauma among primary school teachers in Vikarabad town.

Methods: A total of 150 primary school teachers from 31 randomly selected primary schools in Vikarabad town were interviewed using a questionnaire regarding management of dental trauma. The completed proforma was collected and the results were statistically analyzed to know the knowledge and attitudes regarding emergency management of dental trauma.

Results: 37.3% of primary school teachers reported that tooth fracture was the most common dental emergency among school children and 58.6% of them had never experience the management of dental trauma. 32% of teachers were cleaning the avulsed teeth with the tap water and 24% of them were unaware of management of avulsed teeth. Majority of primary school teachers were eager to have knowledge regarding dental trauma through continuous dental education programs and workshops.

Conclusion: The research clearly implicates that the primary school teachers in Vikarabad town had little and poor knowledge of emergency management of dental trauma.

Introduction

Traumatic dental injuries are common. A review of the literature from 1995 to 2007 shows that the prevalence of traumatic dental injuries in primary and permanent teeth is high throughout the world. Statistics from most countries show that one fourth of all school children and almost one third of adults have suffered trauma to their permanent dentition, but there are variations among and within countries. A large number of studies reveal that dental trauma mainly affects the upper central incisors and can lead to a loss of function as well as a negative impact on quality of life, producing psychological and social discomfort, with lowered self-esteem, embarrassment upon smiling and difficulty in relating with others. Post-traumatic complications may occur, including crown discoloration, cervical root fracture, ankylosis, root resorption and tooth loss. Epidemiological data show that about 50% of children have their primary or permanent dentition affected by traumatic injuries throughout the school period. In primary dentition, studies have found prevalence estimates of 10-15%. Approximately 40% of children have their first contact with the dentist due to a traumatic injury.

Home and schools are the most common locations where traumatic dental injuries occur. For school children, teachers are usually nearby when the accidents occur. In this connection, their knowledge about the management of traumatic dental injuries is vitally important for the prognosis of injured teeth and in helping the injured child to receive appropriate first-aid treatment as soon as possible. However, many studies reveal that the teachers lack such knowledge on the management of traumatic dental injuries. A survey on knowledge of physical education teachers in secondary schools about the emergency management of dental trauma in Hong Kong was published about 10 years ago. It revealed that their level of knowledge about the management of dental injuries was insufficient. Survey studies among school teachers in Singapore, Brazil and UK revealed that they possessed very little technical knowledge on the first response management of tooth avulsion or other dental trauma.

In order to contribute to establish effective strategies of education regarding traumatic dental injuries, the present study was undertaken firstly to assess knowledge and attitude of primary school teachers in emergency management of dental trauma and second,
to impart knowledge regarding the emergency management of dental trauma among primary school teachers in Vikarabad town, Telangana, India.

Methodology

The present study was a cross sectional survey conducted among primary school teachers in Vikarabad town. A total of 150 school teachers from 31 randomly selected primary schools interviewed by giving questionnaire to know the knowledge and attitudes regarding emergency management of dental trauma in school children. This research project was approved by the institutional review board of Sri Sai college of dental surgery, Vikarabad. Permission for the study was obtained from the concerned authorities. The concerned authorities of the selected schools were apprised of the study before taking their permission. The objectives of the study were explained to all the school teachers who participated in the study and also informed consent was obtained from all teachers.

A well designed validated questionnaire containing demographic details, specially framed questions in english language were personally administered to the teachers. The questionnaire was composed of two sections. The first section included basic demographic information, whether the respondents had received formal first-aid training or acquired dental trauma information and whether they thought that they could distinguish deciduous teeth from permanent teeth. The second part consisted of questions about management of dental traumatic injuries. The respondents were then asked to tick the most appropriate answer from the given list of answers, in order to assess their knowledge and attitude regarding the emergency management of dental trauma and dental first aid treatment. Filled questionnaire were collected on the same day. Information regarding the tooth avulsion and its emergency management, as a health talk using power point presentation was given in both english and local language in order to improve the awareness among school teachers. Data collected were analyzed and then were represented in the form of tables.

Results

Of these respondents, 68.6% were females, 55.3% were in the age range of 30 to 40 years and the average years of teaching experience was 17.2 yrs. About 37.3% of school teachers reported that tooth fracture was the most common dental emergency among school children. In all, 71.3% had received previous first-aid training, but only 4.4% had learnt about dental injuries in their training programme, and only 28% of the respondents claimed that they were able to distinguish deciduous from permanent teeth.

When the school teachers were questioned about previous experience about dealing with dental traumatic injuries, very few of 41.4% of school teachers said that they had previous experience and 58.6% reported that they did not have any previous experience of dental traumatic injuries.

Respondents' choice of different transportation media for an avulsed tooth to the dentist is shown in Illustration 1. About 32% of teachers were cleaning the avulsed teeth with the tap water and 24% of them were unaware of management of avulsed teeth (Illustration 2).

Majority of school teachers were eager to have knowledge regarding dental trauma through continues dental education programs and workshops.

Discussion

This study was conducted to assess the knowledge regarding the proper management of traumatic dental injuries (TDIs) among primary school teachers. Only 41.4% of teachers had previous experience about dealing with DTI and only 4.4% had said that they had knowledge about management of tooth avulsion.

It is an unexpected finding that the majority of school teachers had not received formal teaching training. This finding was consistent with the study done by Newman and Crawford in England, where only 67% of the teachers had been specifically trained in teaching and 91% had been trained in first aid but in our study the percentage of teachers trained in first aid is very low (10%). When enquired about any information received on tooth avulsion or any informative material available at school on managing traumatic dental injuries (TDIs), 72% of teachers disappointingly said that they had not received any advice regarding emergency management of avulsed tooth and only 30% of teachers said they have information material in the school on managing traumatic dental injuries (TDIs).

44% were felt comfortable in replanting the avulsed tooth back in to the socket, but this figure was much higher when compared to that obtained in study done in Hong Kong by Chan, where it is 17.5%. These findings emphasize that additional traumatic dental injuries (TDIs) education would be exceedingly
beneficial for school staff.
In our study, none of the participants recognized that an avulsed tooth should be intra orally transported, while in the study done by Lim et al.\(^2\) 13.2% of the participants answered that the best transport medium for an avulsed tooth is saliva. In Singapore, for instance, only 15% knew the ideal storage media and in China\(^2\) only 9% choose milk as the best media for avulsion transport. Over 90% of our participants expressed an interest in receiving more information on traumatic dental injuries (TDIs) management; this overwhelming interest among participants has also been shown in other studies. It is possible that by offering training to the teachers' continuing education, mainly by means of workshops, as it was suggested by the managers, there will be an improvement of the approach of dental trauma and other related outcomes.

Schools are a social environment appropriate for the development of activities that promote oral health. Such activities should include students, school assistants and even members of the community. Collaborative actions between dental and physical education professionals are needed in order to develop continued education programs. The development of public awareness about dental trauma depends on a clear, objective and motivating message in order to make lay people not only aware of their role in saving teeth in case of accidents but also to make them feel responsible for their own health.

**Conclusion**

The research clearly implicates that the knowledge regarding emergency management of dental trauma of primary school teachers in Vikarabad town is insufficient. An educational campaign dedicated to this topic is recommended for school teachers. Dental trauma emergency management is recommended to be added to first-aid publications and as teaching for school teachers and health professionals.

**References**

Illustrations

Illustration 1

Responses to would you keep the tooth till you reach the dentist?"
Illustration 2

Responses to "what would you do if the 'tooth out of socket' was covered with dirt?"