Knowledge And Attitude Towards The Emergency Management of An Avulsed Tooth Among The Parents of Navi Mumbai, Maharashtra

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Abstract

Background: Traumatic injuries to the teeth are common in children and adolescents.The steps taken by the parents or caretakers immediately after dental avulsion are considered crucial for the success of treatment.
Aim: The aim of the present study was to evaluate the knowledge and attitude of the parents residing in Navi Mumbai about the emergency management of an avulsed tooth.
Results: The results revealed lack of knowledge among the parents regarding management of an avulsed tooth. Although 93.16% of the parents would seek professional help only 11.25% of the parents considered milk as atransport media for avulsed tooth.
Conclusion: The results of the study reveal that there is a lack of awareness among parentsof Navi Mumbai regarding emergency management of an avulsed tooth. Therefore, educating parents regarding management of avulsed teeth at the site of injury must be done at community level.

Keywords: Attitude, Avulsion, Knowledge, Management, Storage media.

Introduction

Dento-alveolar injuries are one of the most common injuries during the growing age of an individual. It has been reported that the oral injuries account for as much as 5% of all body injuries, with an even higher proportion of oral injuries among the children.[1]Of all the traumatic injuries of the permanent dentition the incidence of avulsion has been reported to be between 0.5%-3%.[2-5] Prompt and appropriate management of traumatic injuries to teeth is an important factor in determining the prognosis of treatment. In case of an avulsed permanent incisors, the well-being of the tooth is said to be depending largely upon the length of time for which it is out of the mouth[6] and the medium in which it is stored.[7]The peak age for avulsion of permanent incisors is between 7 and 9 years[8]. Studies have been carried out earlier to assess the knowledge of lay and professional persons with regard to management of avulsed teeth[9-13]. Also, many studies have been done to assess the knowledge and attitude of teachers and parents regarding management of an avulsed tooth among Indian population [2,3,14], however not many studies have been reported within Navi Mumbai population.Therefore, the aim of the present study was to assess the knowledge and attitude of parents residing in Navi Mumbai regarding emergency handling of avulsed teeth in their children.

Materials And Methods

The questionnaire was distributed among 175 parents of children less than 15 years of age, who were residents of Navi Mumbai and visited to the department of Pedodontics and Preventive dentistry for routine dental treatment. Ethical clearance was obtained from the Institutional Ethical Clearance Committee prior to the commencement of the study. The objectives and nature of the study were explained to the participants. The parents who willingly accepted to fill the questionnaire were part of the study.A mong 175 parents only 161 had filled the questionnaire properly and completely.

Questionnaire was designed in English language, and was also translated into Hindi and Marathi. The parents filled the questionnaire based on their preference of the language. The questionnaire was modified from the questions introduced by Raphael and Gregory[9]. The first part of the questionnaire included the general information about the parents followed by 8 questions which assessed the knowledge, attitude and previous experience of the participant toward the handling of avulsed permanent tooth at the site of an injury. Participants were requested to mark the option which they felt was the most appropriate answer. The completed questionnaires filled by the parents were collected on the same day. All the parents who participated in the study were then educated about the emergency management of avulsed tooth as per the guidelines.

The data obtained from 161 questionnaires were entered in Microsoft excel 2013 using a study specific validated sheet. Data was also checked for errors and consistency and was cleaned for final analysis.

Results

A total of 161 parents (95 mothers and 66 fathers) filled the questionnaire completely and were therefore included for the statistical analysis.

Among the respondent parents, 83 (51.55%) were undergraduates, 46 (28.58%) were graduates and 32 (19.87%)were postgraduates.

Table 1: Distribution of study population

Respondent parents	No.	%
1. Father	66	40.9
2. Mother	95	59.1
TOTAL	161	100%

Table 2: Distribution of study population according to educational qualification

Qualifications	No.	%	Chi square value	P value, Significance
1. Undergraduate	83	51.55	38.27	0.015, Significant difference
2. Graduate	46	28.58		
3. Post- Graduate	32	19.87		
Total	161	100.0		

Table 3: Parent's previous experience of the child's dental injury (trauma)

Options	No.	%	Chi square value	P value, Significance
1. Yes	28	17.39	68.47	<0.001, highly significant
.2. No	133	82.61		
Total	161	100.0		

When parents were asked about their child's experience of dental injury, it was found that 17.39% children had previous experience of dental injury whereas 82.61% had no experience of past dental injury. The statistical difference in the experience was found to be highly significant (<0.001) [Table 3]

Table 4: Opinion of the parents regarding handling of an avulsed teeth

Options	No.	%	Chi square value	P value, Significance
1. Save it	92	57.14	3.286	0.70, not significant
2. Discard it	69	42.86		
Total	161	100.0		

When parent's opinion was asked about what would they do if the tooth is out of its place completely due to injury, only 57.14% of the respondents would like to save it.[Table 4]

Table 5: Opinion of the respondents about of the management of dislodged tooth in the mouth

Options	No.	%	Chi square value	P value, Significance
1. Put it back in its original position	102	63.35	65.752	<0.001, highly significant Difference
2. Remove it from the child's mouth and discard it	33	20.5		
3. Remove it from the child's mouth and store it	26	16.15		
Total	161	100.0		

When the parents were asked what would be done when the tooth is out of its place, however in the child's mouth, 63.35% would put the tooth back in its original position, 20.5% would discard it and the remaining 26% would store it. It was found that the difference in the response was highly significant (<0.001) [Table 5]

Table 6: Distribution of study population based on their opinion about storage of an avulsed tooth

Options	No.	%	Chi square value	P value, Significance
1. Wrap it in paper	37	22.9	29.404	<0.001, highly significant difference
2. Keep it in water	55	34.1		
3. Store in ice	33	20.5		
4.Keep it in milk	18	11.25		
5. Any other	18	11.25		
Total	161	100.0		

When asked about the type of storage media that would be used to keep the avulsed tooth, it was found that 22.9% would wrap the tooth in paper, 34.1% would keep in water, 20.5% would store in ice, 11.25% would keep in milk and remaining 11.25% would use any other media respectively for storage of the avulsed tooth. The difference was found statistically highly significant (<0.001) [Table 6]

Table 7:Response onseeking professional help for the avulsed tooth.

Options	No.	%	Chi square value	P value, Significance
1. Yes	150	93.16	120.0	<0.001, highly significant difference
2. No	11	6.84		
Total	161	100.0		

When asked whether they would seek professional help for avulsed tooth, 93.16% showed interest in seeking professional help whereas only 6.84% showed no interest. As maximum number would seek professional help the difference was highly statistically significant (<0.001) [Table 7]

Table 8: Distribution of study population based on their choice of professional consultation for treatment

Options	No.	%	Chi square value	P value, Significance
1. Paediatrician	8	4.96	159.273	<0.001, highly significant difference
2. Dentist	47	29.19		
3.Physician	3	1.88		
4. Paediatric dentist	103	63.97		
Total	161	100.0		

The preferred choice of consultation for treatment of avulsed tooth was that 4.96% would consult paediatrician, 29.19% would consult dentist, 1.88% would consult physician and remaining 63.97% would consult paediatric dentist. [Table 8]

Table 9: Distribution of study population based on when they would visit the dental professional for treatment

Options	No.	%	Chi square value	P value, Significance
1. Immediately	121	75.1	313.255	<0.001, highly significant difference
2. After bleeding stops	11	6.8		
3. On the same day	22	13.6		
4. Next Day	3	1.8		
5. After a few days	4	2.7		
Total	161	100		

It was observed from the answers that for treatment of traumatic injury 75.1% would consult immediately, 6.8% would consult after the bleeding stops, 13.6% would consult on the same day, 1.8% would consult next day whereas remaining 2.7% would consult after few days. It was therefore evident that majority of the parents would seek treatment immediately and the difference in attitude was statistically highly significant (<0.001) [Table 9]

Table 10: Distribution of study population according to their interest in knowing about the emergency management of tooth which is out of its socket (avulsed)

Options	No.	%	Chi square value	P value, Significance
1. Yes	155	96.2	137.894	<0.001, highly significant difference
2. No	6	3.8		
Total	161	100.0		

When parents were asked about their interest in knowing about the emergency management of an avulsed tooth, almost 96.2% showed interest whereas only 3.8% showed no interest. (<0.001) [Table 10]

Discussion

The crucial factors for a favourable prognosis of are implanted avulsed tooth are less extra oral time, the storage and transportation medium of the avulsed tooth, and minimal handling of the root surface and the periodontal ligament. The prevalence of dental injuries is 60%, of which over 48% involves maxillary teeth.[14-17]It has been suggested that the permanent anterior teeth play an important role in good psychological development of child and adolescent. Children are often said to exhibit lower self-esteem when the aesthetic harmony is insulted by dental avulsion[18,19]

Many reports [20-23] indicate that there is a lack of knowledge regarding the immediate management of dental trauma.

The present study was designed to evaluate the knowledge and attitude regarding the emergency management of an avulsed tooth among Navi Mumbai population.

In the present study when the parents were asked about the child's previous experience of dental trauma it was found that out of 161 parents only 17.39% had experienced dental trauma in their children.

Furthermore, it was found that only 57.14% of parents would save the avulsed tooth. One of the main requisites for the treatment of dental avulsion is tooth reimplantation as soon as possible, thus keeping periodontal cells viable for healing and a possible pulp revascularization[20,24].In the present study, immediate reimplantation was considered by 63% of parents for teeth that were completely dislodged however still in the mouth. However, if the tooth was completely out of socket 42% would discard it. According to the studies done by Raphael and Gregory 66.6%[9]and Hegde et.al 66.5%[25]of the respondents would re-implant the avulsed teeth, whereas, the reports by Oliveria et al.[26] showed only 39% would re-implant the avulsed tooth.

Prior to re-implantation, there is a primary need for cleaning and maintaining the tooth in a storage medium[17,21]. If the visible dirt is observed then cleaning of avulsed permanent tooth must be performed with saline solution. It is well established that the best storage method is the tooth's own alveolus. When the immediate reimplantation is not performed, other methods that can result in pulpal and periodontal healing are milk, sterile saline solution and saliva. Saliva and milk are considered easy-to-obtain storage methods for the avulsed tooth[20], while saline solution can be easily available in drug stores. In the present study, only 11.25% would use milk, 22.9% would wrap in paper, 20.5% keep in ice and maximum parents (34.1%) parents would use water as a storage media. These results clearly suggest that inadequate knowledge among the parents with regards to storage of the avulsed tooth and thereby having a detrimental effect on its prognosis.93.16% of our respondents said yes for seeking professional advice for the traumatic injury. 63.97% of parents would report to Paediatric Dentist, and 29.19% to Dentist immediately (75.1%) or on the same day (13.6%).96.2% of the study population showed interest in knowing about the emergency management of avulsed tooth.

The results of the present study clearly indicate inadequate knowledge among the parents for handing the avulsed tooth. It is surprising that inspite of having 5 dental institutions in Navi Mumbai, none of the respondents had received any information regarding the emergency management of an avulsed tooth. There appears to be an absolute need for creating more awareness at the community level.

Awareness was created among all the parents who participated in this study. All the parents who visit our department are now regularly made aware about management of avulsed teeth at the site of injury. Further efforts are underway to educate the parents at the community level and also school children in various schools of Navi Mumbai.

Conclusion

Creating awareness among the parents regarding emergency management of an avulsed teeth, can not only improve its prognosis but also help in preventing emotional,functional or aesthetic problems due to tooth loss in children.

References

References Are Available on Request at :
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