

Knowledge and Attitude of Parents/Caretakers toward Management of Avulsed Tooth in Maharashtrian Population: A Questionnaire Method

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Abstract:

Background: Traumatic injuries to teeth and their supporting structures during childhood are one of the major problems faced by the dentist in day to day practice. Children usually encounter minor accidents in their routine activities and hence, it of utmost importance to provide emergency care to reduce such outcomes. Most of children with dental trauma present late for treatment due to lack of awareness and knowledge among parents/caretakers resulting in unfavorable long-term prognosis. This study was conducted to evaluate by means of a questionnaire, the knowledge, and usual attitude of the parents/caretakers about the management of avulsed tooth in children of age group 5-14 years.

Materials and Methods: The questionnaire containing 6 questions was distributed among 200 parents/caretakers who participated in the study. The questions assessed the knowledge and attitude of parents toward avulsed tooth and its management. Statistical analysis was performed using Statistical Package for Social Sciences version 17.0.

Results: A lack of technical information regarding the preservation and management of avulsed tooth was observed among the parents/caretakers. The education status of the study population when associated with the knowledge variables of avulsion showed that most of the variables had statistically significant association with $P < 0.04$.

Conclusion: These data reinforce the need to provide the population with some important information regarding the emergency management of avulsed tooth. This warrants the need of effective communication between dental professionals and caretakers for better handling of dental emergencies.

Key Words: Attitude, avulsion, dental trauma, knowledge, management

Introduction

Dental trauma remains one of the most important oral health problems in childhood causing pain and distress. Children usually encounter many minor accidents during their day to day activities like cycling, skating, running, etc. All these activities result in complete avulsion of teeth.¹ The most commonly avulsed teeth are the central incisors. The enigmatic mechanism for tooth avulsion is thought to be the incomplete formation of the roots and the lack of resiliency of the periodontal ligament seen at those ages.² Epidemiological studies indicate that dental trauma is a significant problem in young people and that in the near future the incidence of trauma will exceed that of dental caries and periodontal disease in the young population.³ Andreasen and Andreasen documented that oral injuries are the fourth most common injuries among the 7-30 years age group.^{4,5}

Traumatic injuries can thus, have a significant effect on a child's quality of life. ⁶Walker and Brenchley (2000) observed that 16% of dental injuries led to tooth loss.⁷ Most of the children with avulsed tooth present late for treatment due to lack of awareness and knowledge among parents resulting in unfavorable long-term prognosis.¹ The prognosis of the avulsed tooth depends solely on the appropriate treatment that in turn relies on the knowledge of the parents regarding the management of the avulsed tooth.² Hence, the aim of the present study was to assess the knowledge and attitude of parents/caretakers in the emergency management of avulsed tooth in the Maharashtrian population.

Materials and Methods

An aphoristic questionnaire was formulated to assess the knowledge and attitude of parents and caretakers of 5-14 years old children regarding the management of avulsed tooth. The questionnaire consisted of 6 closed-ended questions for the assessment of parents' knowledge and attitude toward their child's avulsed tooth and its emergency management. The questionnaire was treated in both English and vernacular language and was checked by 3 professors of the same department so as to ratify the study. The parents who were willing to participate in the study only were interviewed. The institutional ethical committee clearance was obtained

prior to the study. Statistical analysis was performed using Statistical Package for Social Sciences version 17.0 (IBM Company). Chi-square analysis was used, and the level of significance was found to be $P < 0.04$. The questions are shown in Appendix 1.

Results

A total of 200 parents participated in this study. The answer for each question was documented as follows:

For answer 1

- a. 90% of parents said their child experienced dental trauma
- b. 10% did not experience dental trauma.

For answer 2

- a. 65% said they put it back into child's mouth
- b. 25% removed it from the child's mouth
- c. 10% discarded the tooth.

For answer 3

- a. Nearly 80% saved the tooth
- b. 20% did not save the tooth.

For answer 4

- a. 95% did go to the dentist
- b. 5% did not go to the dentist.

For answer 5

- a. 60% visited the dentist immediately
- b. 30% visited after sometime
- c. 10% visited next day.

For answer 6

- a. 10% in water
- b. 5% in cloth
- c. 5% in milk
- d. Nearly 80% did not use any medication to save the tooth.

Based on these, the results were graphically represented as shown in Graphs 1a-f.

Discussion

The questionnaire used in the present survey was aphoristic, direct, and closed-ended questions. Similar studies reported in the literature surveyed the knowledge of parents and teachers concerning the management of avulsed teeth.⁸⁻¹¹ The prognosis of the avulsed tooth depends on the immediate management of the tooth after its displaced out of the socket. But reports indicate that parents/caretakers present at the site lack knowledge about the immediate management of this tooth. One of the most important requirements is reimplantation of the tooth into its socket after it is cleaned with saline solution so as to preserve the cells of the periodontal ligament viable for healing and revascularization.

In the present study, 90% of the parents/caretakers said that their child experienced dental trauma at the age of 5-14 years. Furthermore, 65% of them usually placed the avulsed tooth back into the child's mouth, similar to previous studies conducted. 95% of the parent's visited the

dentist which was similar to study conducted by Oliveira *et al.* (93%).²

In the present study, only 2.5% of parents would leave the avulsed tooth inside the mouth and it was much lesser than reimplantation of an avulsed tooth, similar to a study reported by Al-Jundi,¹¹ whereas, the reports by Oliveira *et al.*,² (39%), Raphael and Gregory¹² (66.6%), and Hegde *et al.*,¹³ (66.5%) showed that some of the parents would reimplant the avulsed tooth, which clearly indicates the insufficiency in the knowledge about the immediate management of avulsed tooth. Hence, the parents/caretakers need to be educated more this aspect.

The present study found that about 20% of the mothers would discard an avulsed tooth, which was similar to the study conducted by Oliveira *et al.*² (10%). This may be due to the fact that they consider avulsed tooth as an infected material which needs to be discarded. These results were not similar to the studies conducted by Hegde *et al.*¹³ (68%).

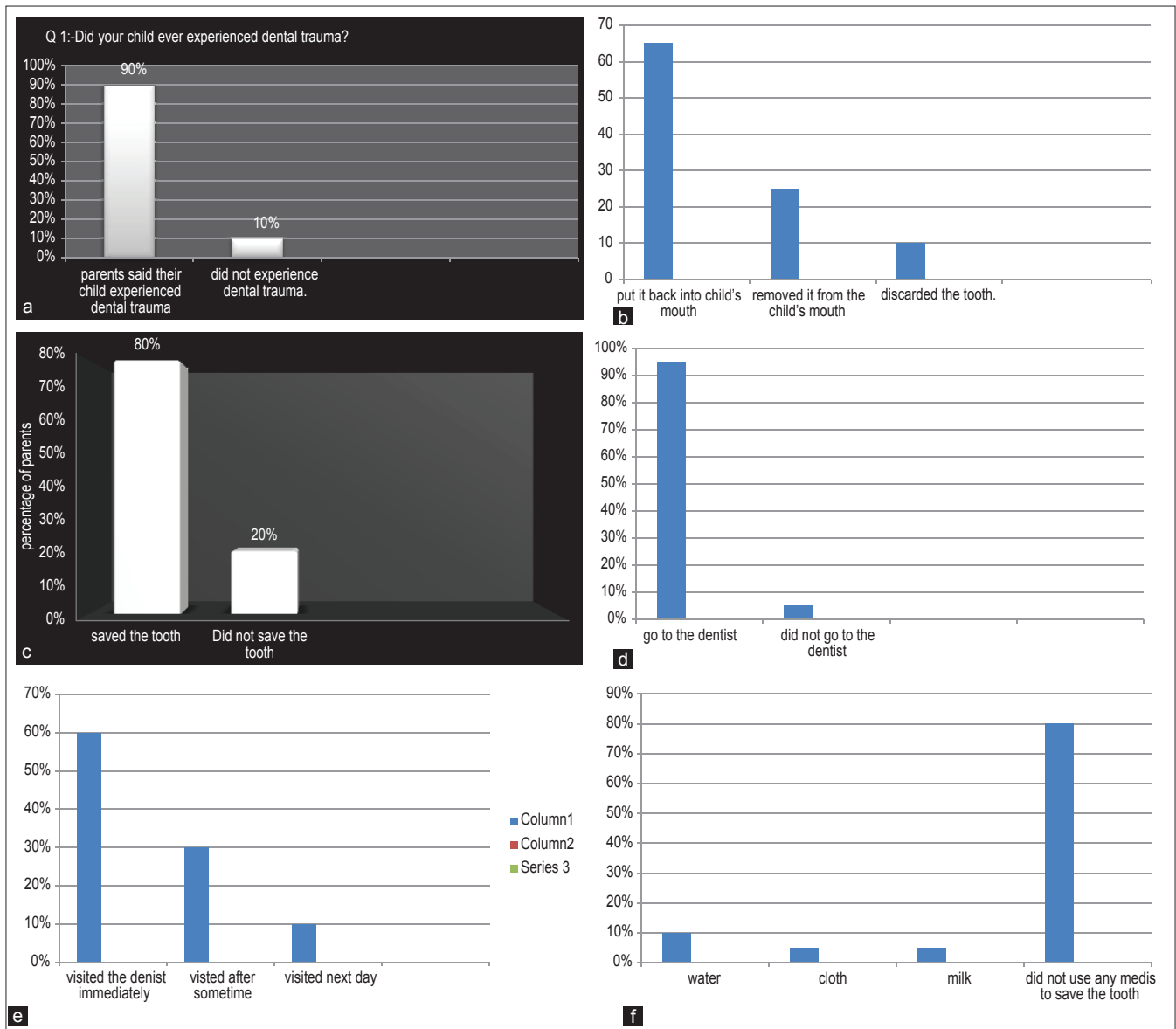
It is a well-documented fact that the best storage media for avulsed tooth is the patient's own socket. But as the tooth is usually contaminated by dirt, it is necessary to clean the tooth and then place it back into its own socket.

Before reimplantation of the avulsed tooth, certain media are required to preserve this tooth. The most important one being milk, sterile saline solution, and saliva. These media are thought to promote pulpal and periodontal healing. Among these, milk and saliva are easy to obtain storage media and normal saline is easily available in drug stores. In the present study, only 2% of the parents/caretakers preserved the tooth in an appropriate media like saline or saliva. Most of them usually wrapped the tooth in a soft cloth or paper. None of them used milk to preserve the avulsed tooth. This indicated poor knowledge among the population with regards to preserve the tooth which led to the failure of its reimplantation.

To summarize, lack of knowledge among the parents/caretakers concerning the avulsed tooth demands the need of more effective communication between the dental professionals and parents. Furthermore, preventive programs and educational campaigns should be conducted to ensure good knowledge about the preservation and management of the avulsed teeth.

Conclusion

This study shows the need to provide the general population with information regarding the emergency management of avulsed tooth. This study shows the need of effective communication between dentists and caretakers for better management of avulsed teeth.



Graph 1: Questionnaire formulated and distributed to assess the knowledge and attitude of parents or caretakers of 5-14 years old children regarding the avulsed tooth. (a) Graphical representation of question 1 of the survey. (b) Graphical representation of question 2 of the survey. (c) Graphical representation of question 3 of the survey. (d) Graphical representation of question 4 of the survey. (e) Graphical representation of question 5 of the survey. (f) Graphical representation of question 5 of the survey.

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Appendix 1

Question 1: Did your child ever experience dental trauma?

- a. Yes
- b. No

Question 2: What would you do if the tooth was in child's mouth, however, out of place?

- a. Put it back into the alveolus
- b. Remove it from child's mouth
- c. Discard it completely

Question 3: What would you do with the tooth that is knocked out of the socket?

- a. Save it
- b. Discard it

Question 4: Did you seek professional treatment?

- a. Yes
- b. No

Question 5: When did you visit the dentist for the treatment after the trauma?

- a. Immediately
- b. After sometime
- c. Next day

Question 6: How did you carry the tooth?

- a. In water
- b. In cloth
- c. In milk
- d. Not in any media