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Emergency management of dental avulsion: Attitude, knowledge and perception of Kashmiri mothers: A survey

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Abstract

Introduction: Children encounter many accidents during their day to day activities. The Lack of awareness and knowledge regarding dental trauma result in delayed presentation in the dental office which leads to unfavorable prognosis of the tooth.

Aim: The aim of our study was to assess the knowledge and attitude of Kashmiri mothers towards the dental avulsion and its early management.

Methodology: A questionnaire was used to interview 300 Kashmiri mothers who routinely accompanied their children aged between 6 to 13 years to the Department of Pedodontics and Preventive Dentistry Govt. Dental College and Hospital Srinagar for day to day procedures. The variables comprised of questions about their knowledge and perception toward dental avulsion. Each question was provided with multiple options and mothers had to mark one option.

Conclusion: It was concluded from the study that the knowledge of Kashmiri mothers with regards to the management of tooth avulsion was in-sufficient.

Keywords: Dental avulsion, extra-alveolar time, dental trauma

Introduction

Oral health is an important aspect of the overall health of children and adolescents. For children, parents play an important role in the well-being especially before the school time and during the school [1]. Dental negligence is common among parents, and it can be the main reason for having unhealthy teeth in children when they grow up. But children are not mature enough to recognize the problem and they rely on the knowledge and care of their parents for their oral health. For this reason, the knowledge and attitude of parents about the dental health during the early childhood of their children is important to avoid the dental problems later on. Dental alveolar trauma is one of the most commonly encountered dental emergencies during the early childhood [2]. The prognosis of the tooth is determined by the appropriate intervention and immediate management of the traumatized teeth. The extent of traumatic dental injuries can range from minor enamel chipping to the severe extensive injuries to the periodontium or dental avulsion [3, 4].

Dental avulsion or exarticulation can be defined as the complete removal of the tooth out of its socket. It causes severe damage to pulp and the periodontium of tooth with or without fracture of the alveolar bone. The most and foremost cause of dental trauma in children includes fall during sports and leisure activities. Due to the elastic nature of the alveolar bone in children it mostly results in loss of anterior primary and permanent tooth causing pain, aesthetic, functional and psychological impairment [5]. Thus, it is mandatory to provide immediate and prompt emergency care to the child so as to reduce the possible outcomes. This in most scenarios becomes the responsibility of the common lay people available at the accidental site. A very high percentage of children that have met the dental trauma present late to the dental office for treatment, resulting in unfavourable long-term prognosis. Mother plays a very significant role in the life of a child, as they are the primary source of information to impart their knowledge and their appropriate decision making plays an important role in the management of avulsed tooth. Most of the times dental injuries occurs in young permanent teeth.

These young permanent permanent anterior teeth are not only important for esthetics but are very essential for phonetics, mastication, integrity of supporting tissues, as well as psychological and mental wellbeing of children, thus, the loss of anterior tooth can cause significant effect on a child's quality of life [6].

There are numerous studies that have investigated the knowledge of avulsed teeth in children among parents, school teachers, physicians and general dentists, and have emphasized the necessity of dental education to prevent and improve the prognosis of avulsed teeth. Maternal awareness about dental avulsion have an immediate impact on the outcome of this kind of dental trauma as they are the primary care taker of child in most situations [7]. Timely intervention by the dentist can prevent the tooth and minimize the damage that had occurred. For example, in cases of dental avulsion, the prognosis of the tooth depends mainly upon the immediate management at the time of the emergency. The extra oral dry time, reimplementation of the tooth before the patient's arrival at the dental clinic and the storage of the tooth in a physiologic storage medium are the other factors that play an important role in the overall prognosis. Therefore, creating public awareness regarding the immediate management of dental trauma plays a major role in the treatment and prognosis of avulsed tooth. Education programs must be implemented to increase the knowledge and awareness so as to enhance the prognosis for dental trauma [8].

There is no study available in the literature so as to assess the knowledge and perception of Kashmiri mothers towards the emergency management of dental avulsion. Hence, the aim of our study was to assess the knowledge and attitude of Kashmiri mothers in the emergency management of dental trauma so that awareness programmes could be directed accordingly.

Materials and Methods

We carried this survey in the Department of Pedodontic and Preventive dentistry GDC Srinagar. All the mothers who accompanied their children aged 6-13 years to the department for receiving dental treatment were included in the study. A 10-stemmed questionnaire was prepared for this study, which was modified form of questionnaire used by Raphael SL and Gregory PJ. The research protocol was approved by Institutional Ethical Committee. The mothers were apprised about the nature and objective of the survey. The survey comprised of 10 questions regarding the dental avulsion of a tooth in permanent dentitions. The questions were designed so as to check the knowledge and attitude of the mothers on the management of tooth avulsion. Each question was provided with multiple options and the mothers had to mark one option provided to them in multiple choice questions.

Results

It was revealed from the responses of mothers that significant number of mothers (42%) had not experienced any dental trauma in their life, a smaller number of mothers (10%) had a previous experience of dental trauma and 30% of mothers said their children experienced dental trauma. When asked about their experience towards avulsed tooth from their family, only a small number of mothers (18%) had received an experience about avulsed tooth.

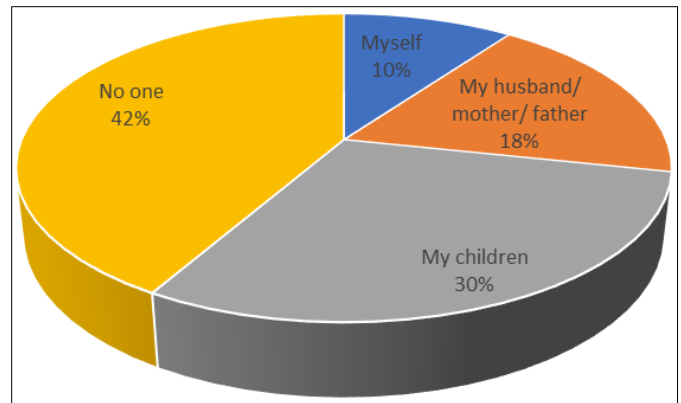


Fig 1: Have your family ever had any dental trauma?

The history regarding the experience of avulsed tooth was recorded, only 3% of mothers were found to have an experience of avulsion and 97% had no experience of dental avulsion during their life.

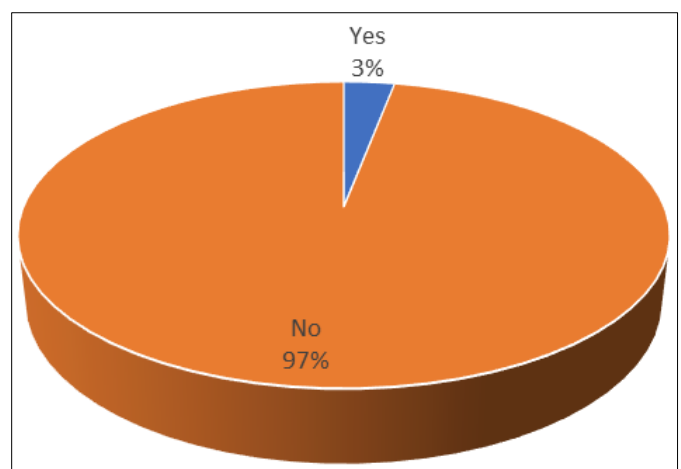


Fig 2: Do you have any experience with avulsed tooth?

Regarding the preservation of avulsed tooth it was noted that only 10% were found to believe that avulsed tooth can be saved and 90% had no knowledge that there is a possibility to save an avulsed tooth.

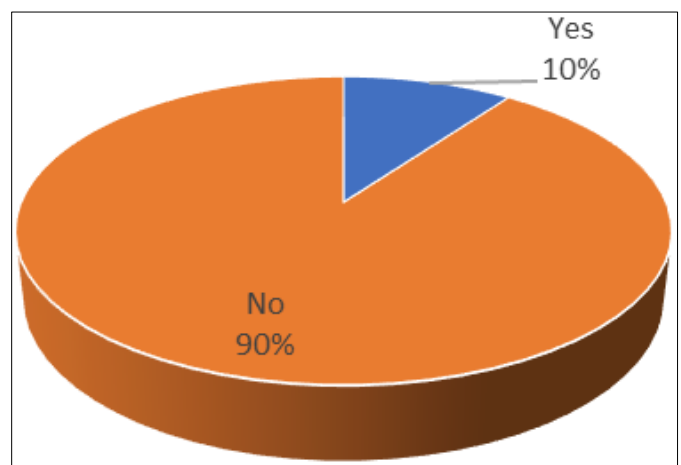


Fig 3: Do you think that avulsed tooth can be saved?

The responses recorded whether there is need of seeking any treatment in case of avulsion, 27% of mothers considered it to be desirable but a huge percentage (40%) thought it is not

necessary to treat an avulsed tooth. Other responses recorded were very essential (23%) and essential (10%).

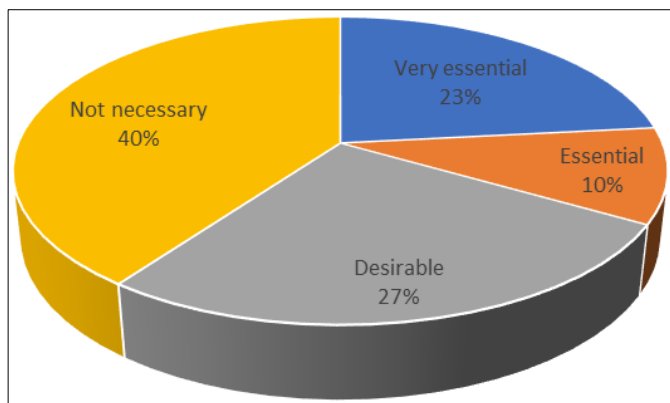


Fig 4: Do you think treatment is needed after tooth avulsion in a child?

Regarding “what would you do if the tooth is knocked out of the socket?” 17% mothers said they would discard the avulsed tooth and only 46 % would prefer saving an avulsed tooth and 37% did not have any idea about what they are supposed to do with the avulsed tooth.

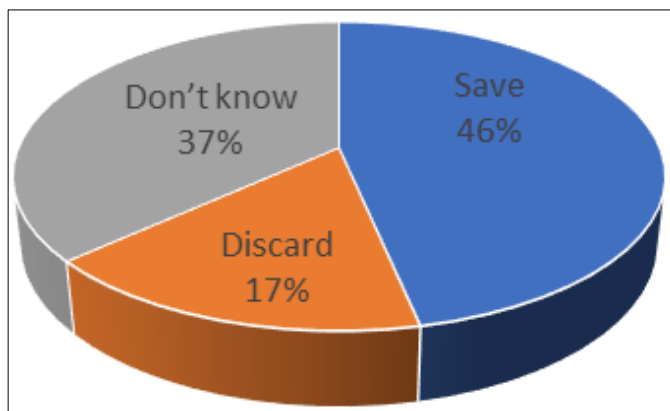


Fig 5: What would you do if the tooth is knocked out of the socket?

When they were asked how to save the tooth maximum number of mothers (70%) preferred cleaning it with water, and trying other methods like washing with soap (4%) and clean it with soft cloth or paper (9%). On the contrary, 17% said that afraid in cleaning the teeth on their own.

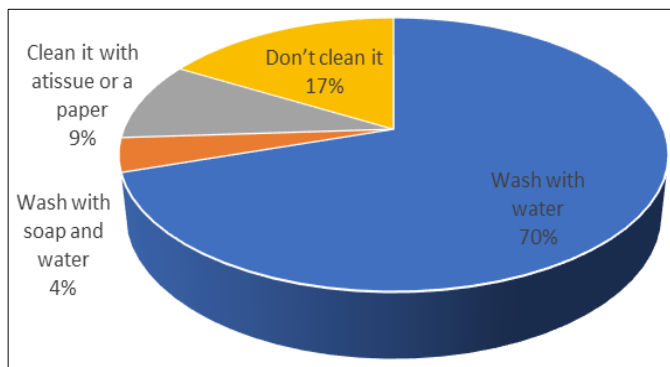


Fig 6: What would you do with the saved tooth?

When asked “What would you do if the tooth was in child's mouth, About 5% of mothers answered that they would

remove the tooth from the mouth, 67% do not know what to do. 8% said they would put the tooth back into the socket and 20% of mothers said they would leave the tooth inside the mouth.

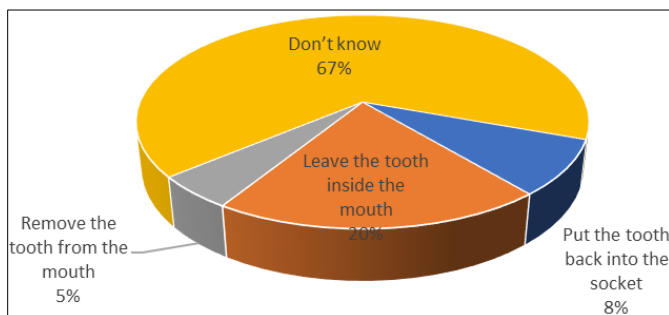


Fig 7: What would you do if the tooth was in Child's mouth however out of place?

When asked, what would you do when avulsion of tooth occurs? 65% responded that they will visit a dentist, 10% to a physician 15% told that they will give self-medication and 10% told no treatment is required.

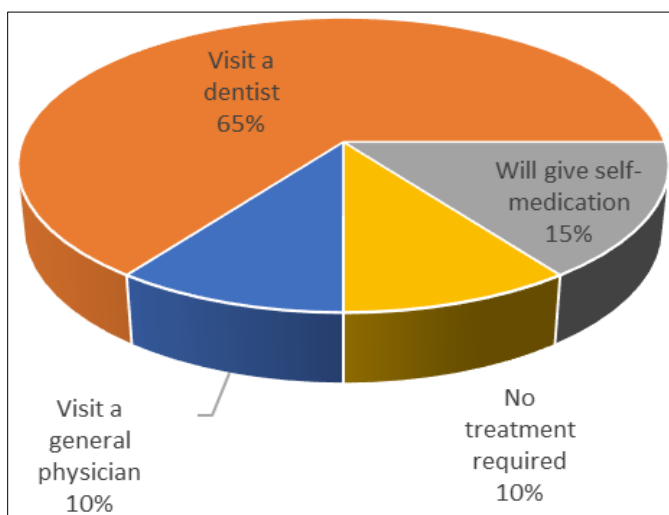


Fig 8: What would you do when avulsion of tooth occurs?

On exploring the perception when do you think a professional treatment is needed? 28% answered Only when if any pain or other symptoms are noticed. 54 % answered they will immediately seek professional treatment. 13% next day and 5% told after One week.

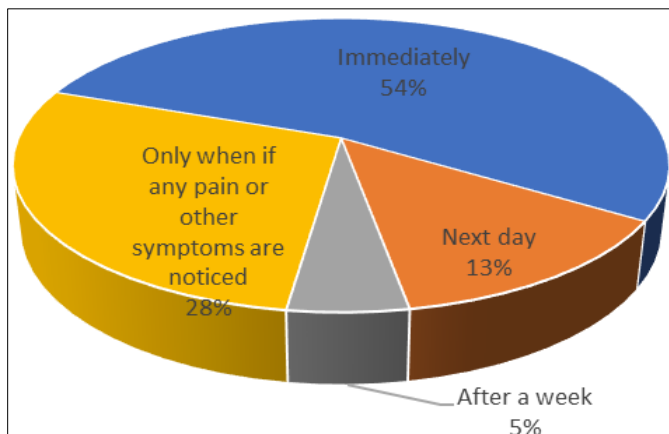


Fig 9: When do you think a professional treatment is needed?

When asked How Will you carry the tooth to the dentist? 85% told they will wrap it in paper or gauze 2% told they will carry in milk, 1% in their mouth and 12% in water.

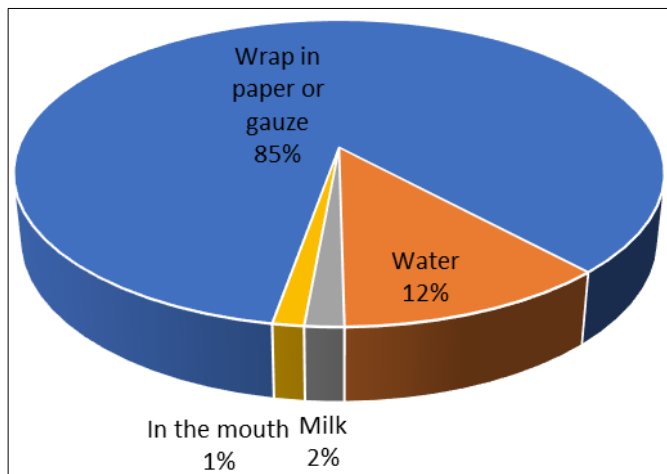


Fig 10: How Will you carry the tooth to the dentist?

Discussion

The emergency management of dental avulsion of both deciduous and permanent teeth in children is well outlined in the guidelines of the American Academy of Pediatric Dentistry and the International Association of Dental Traumatology. However, no information is available about the level of knowledge in the management of dental trauma among the caregivers of Srinagar city. The objective of this study was to explore the level of educational knowledge and awareness among mothers of Kashmiri children visiting the Govt dental college and hospital Srinagar with their children for routine dental treatment^[9].

The knowledge and perception of the early emergency management of dental trauma is an essential first aid tool. Assessing public awareness and time lapse for seeking help after dentoalveolar trauma is of the utmost importance for the overall prognosis of avulsed tooth. The questionnaire used in the present survey was short and with simple, direct, and closed-ended questions to check the level of knowledge of mothers regarding the dental trauma. The studies have been reported in the literature that surveyed the knowledge of parents and teachers regarding the management of avulsed teeth. The present study showed lack of awareness regarding dental avulsion among the mothers of Kashmir as 40% mothers answered that treatment is not required after tooth is lost from its position and 67% responded that they do not know what to do to the avulsed tooth. On asking about the ways of saving an avulsed tooth, maximum number of mothers (70%) preferred cleaning it with water, instead of trying other ways like washing with soap (4%) and clean it with soft cloth or paper (9%). When asked How will you carry the tooth to the dentist? 85% told they will wrap it in paper or gauze 2% told they will carry in milk, 1% in their mouth and 12% in water.

The Present study revealed insufficient knowledge in Kashmiri mothers regarding emergency management of tooth avulsion; the possible reason might be that they do not have any previous information and knowledge regarding tooth avulsion.

The importance of healthy periodontium determines the prognosis of a reimplanted tooth. For good prognosis majority of the researchers have considered the following

factors: minimal extra-oral dry period, appropriate storage and transport medium along with minimal damage to root surface and periodontal ligament. Andreasen JO and Hjorting-Hansen E have found that best results will be achieved if the tooth remains out the socket for less than 20 minutes. whereas Lin S *et al.* revealed that appropriate reimplantation of an avulsed tooth within 30 minutes has shown to have a 90% chance of success^[10-12].

This study has examined the effect of knowledge of dental avulsion among Kashmiri mothers and indicated that the increase in the knowledge of mothers regarding the dental avulsion will lead to better prognosis and improve the dental health of their children. Thus, it is concluded in this study the knowledge of the Kashmiri parents is critical for improving the overall dental health particularly dentoalveolar trauma of children. This could be due to the notion that parents with prior knowledge are more aware about the dental emergency and will take their children to dentist immediately. In line with this finding, previous studies indicate that knowledge of parents is critical for improving the dental health of children. Findings of the study of Ningthoujam *et al.* showed that knowledge of parents are critical for emergency management in dealing with teeth problem among their children. In addition, other studies also found that the knowledge is important to maintain healthy teeth of children^[13]. The lack of experience and knowledge expressed by the parents answering the questionnaire concerning dental trauma reflects the need for more effective communication between dental professionals and parents to enable them to act correctly when facing a case of dental avulsion. Additionally, educational campaigns and preventive programs on dental trauma must be organized to improve caregivers' knowledge on emergency management of dental avulsion.

Conclusion

The mothers who participated in this study were having insufficient knowledge about dental avulsion and thus being unskilled to provide emergency care to their child in case of dental avulsion. Therefore, it is necessary to plan educational strategies in the society to increase their knowledge and awareness regarding dental trauma, so that they are able to deliver emergency first aid care during dental avulsion.

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