

Assessment of Knowledge Regarding Avulsed Tooth and its Management among Dental Doctors

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ABSTRACT

Objective: To assess the knowledge of dental doctors working in Public sector, Private hospitals and the clinics of Hyderabad regarding permanent tooth avulsion and its management.

Methods: This cross sectional, descriptive study was carried out in 300 dentists working in Hyderabad from Sept 2015 to Nov 2015, with the collaboration of Faculty of Dentistry Lumhs Jamshoro. Questionnaire were distributed and after completion returned it to investigators. No personal identities were disclosed.

Results: 300 dentists participated in our study 47% reported saliva as the storage medium for avulsed tooth 27% saline and 26% reported milk as a preferred medium for storage. Participants reported that ideal extra alveolar period for avulsed tooth is 20 mints. Follow up with radiographic and clinical examination for one year (58.6%) according to our participants while (41.4%) reported 2 to 4 years follow up period (60.30%) reported that antibiotic prescription should be given.

Conclusion: Moderate, relative lack of knowledge regarding duration of follow up after re implantation was observed. Scenario based questions related to permanent tooth avulsion and its management will enable more in testing dentist's knowledge.

Key Words: Tooth avulsion, Knowledge, Dental Doctors, Management

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INTRODUCTION:

In all dental injuries 0.5% - 3% permanent tooth avulsion is seen, it is reported as the most common cause of tooth avulsion is facial trauma. Prognosis of tooth avulsion mainly depends on the period in which tooth remains outside the alveolar bone and procedures performed at the time of tooth injury. In some cases unfavorable factors may be there like necrosis of the pulp, degeneration of the cells periodontal ligament which results in

inflammatory replacement, resorption of the root and ankylosis of tooth that will lead to loss of tooth eventually. In avulsed tooth re implantation is the treatment of choice. It's not necessary always to perform this treatment.¹ Success of re implantation of tooth is dependent on the maintenance of cell vitality of periodontal ligament (PDL).

A study conducted in UK (United Kingdom) children dental health survey, prevalence of tooth avulsion was 3.0 and 8.0 per thousand permanent maxillary central incisors in 12-14 years old.²

Another study was conducted in Saudi Arabian girls, a considerably higher prevalence rate of maxillary central incisors trauma was seen 31.4% in (12-15 years) old girls.³ Few studies have investigated about knowledge regarding avulsion of tooth and its immediate management in various occupations that are directly or indirectly involved

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in emergency dental case trauma. The recent surveying has reported that the dental assistant's has had a meaningful effect to their level of acquaintance as far as avulsion of the tooth 's management is concerned because the traumatic protocols for the correct and immediate starter shaft are necessary to improve prognosis to short and in the long term of avulsed teeth.⁴

The aim of this study was to evaluate knowledge of dental doctor's working in private hospitals, public sector and clinics in Hyderabad about avulsed tooth and its management.

METHODS:

This cross sectional study was carried out from September 2015 to November 2015 in Hyderabad in collaboration with Faculty of Dentistry Lumhs Jamshoro. 350 dentists were contacted to participate in the study. Questionnaires were prepared that included both open and closed ended questions comprising of gender, type of practice, years of experience, current employment, knowledge about avulsed tooth management. Out of 350 dentists, 300 participated. Questionnaires were given to them they filled it and returned it immediately to the co-investigator.

DATA ANALYSIS: Data was analyzed by SPSS version 16

RESULTS:

Total 300 dental doctors working in Hyderabad, completed the questionnaires. Our study results shows that according to storage medium for avulsed tooth dental doctors reported that patient's saliva is the best storage medium (47%). Milk (26%) and saline (27%) (Table 1). For selection of patient's saliva this could be the reason that it is easily available at the time of trauma. Ideal extra alveolar period according to our participants is 20 mints (57%) (Table 2). Antibiotic prescription according to our participants (60.30%) said yes while (39.7%) said no need of antibiotic prescription (Table 3). Reason behind prescription of antibiotic could be the presence of infection. Follow up with radiographic and clinical examination for one year should be there according to our participant's

Table 1: Storage Media for Avulsed Tooth

Milk	26%
Patients Saliva	47%
Saline	27%

Table 2: Ideal Extra Alveolar Period

20 mints	51%
25 mints	27%
30 mints	22%

Table 3: Antibiotic Prescription

Yes	60.30%
No	39.7%

Table 4: Follow-up Treatment

For 1 year with Clinical & Radiographic Examination	58.6%
For 2 to 4 years with Clinical & Radiographic Examination	41.4%

(58.6%) while (41.4%) reported 2 to 4 years follow up period (Table 4).

DISCUSSION:

The knowledge of the avulsion in dentistry is considered dental urgency and its management is useful by reducing the effort, worry (anxiety) for the patient as well as the dentist. The post traumatic immediate management protocols have improve the forecast with short and long-term prognosis of avulsed of the teeth. Several studies indicated that the dentist have acquaintance insufficient about dealing with dental trauma to permanent incisors and much of dentist have lack of confidence concerning the management of the complex cases of trauma.⁵

Our study shows that saliva 47%, saline 27% and milk 26% as the preferable recommended storage medium. This finding was similar with the results of previous study done in Riyadh Saudi Arabia reported that patients own saliva is the most suitable storage medium.⁶

Highest percentage of participants reported that ideal (extra alveolar period) or period in which tooth remains outside the alveolar bone for avulsed tooth is 20 mints. Respondents reported that endodontic root canal treatment is dependent on the period in which tooth remains outside alveolar bone and stage of tooth root formation. Study conducted in 2009 reported that root canal treatment should be performed within 1 or 2 weeks for an avulsed tooth and that has re-implanted within 30 mints⁷. Above quoted study shows little bit consistent with the study conducted by we. Study conducted in china reported that extra alveolar period for an avulsed tooth is less than 30 mints.⁸ Participants in our study reported that antibiotic prescription for an avulsed tooth is necessary 60.30%. These results matched with the study conducted by Andersson L, reported that for systemic administration tetracycline is the drug of choice after replantation.¹ That means that antibiotic administration is must. Dentist in our study reported that follow-up for 1 year with clinical and radiographic examination is necessary (58.6%). These results matched with the study conducted by de Vasconcellos et al that follow up treatment for 1 year with clinical and radiographic examination is necessary.⁹ Barrett EJ and American Association of Endodontists suggested that the follow-up during 5 years with the clinical examination and radio-graphic is recommended.^{10,11}

CONCLUSION:

The study, which was led over concerning the knowledge of avulsed tooth and its management is found to be around moderate. Relative lack of the knowledge about its duration with regard to implanting tooth has observed. More over scenario based clinical questions shall be made regarding tooth avulsion and its management, which will be helpful in examining dental doctor's knowledge.

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