A STUDY ABOUT KNOWLEDGE OF TOOTH AVULSION AND ITS MANAGEMENT AMONG TEACHERS, PARENTS AND PARAMEDICAL STAFF OF HALDWANI

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ABSTRACT: incidence of tooth avulsion has been reported from 0.5 to 16% common among children of age group 7 to 14 years mainly due traumatic sports. AIM: of the study was to evaluate the knowledge of school teachers and parents of students studying there and para medical staff of various hospital who arrive at accident site first, so that they should know what to do in case of tooth avulsion how it can be preserved. MATERIAL AND METHODS: A study was conducted in Susheela Tiwari Govt. Medical College Haldwani to the knowledge of tooth avulsion. For this a series of multiple choice question where designed among teachers of various schools parents of children (Prefebrally of age group 7 to 14 years) and para medical staff attending emergency of various hospitals in Haldwani region 656 people participated in the study. CONCLUSION: There insufficient knowledge regarding tooth avulsion and first aid treatment lack of knowledge among schools teachers parents and paramedical staff, though paramedical staff is better off than two other groups. Providing better knowledge and information by educational program about tooth avulsion is necessary. KEYWORDS: Tooth Avulsion Tissue Culture Medium Trauma Reimplatation.

INTRODUCTION: Due to trauma tooth is forced out of socket this condition is known as Tooth avulsion Incidence of tooth avulsion has been reported from 0.5 to 16% of traumatic dental injuries.¹ This is common among children of age group 7to 14 years mainly due traumatic sports injuries while playing games like football and cricket, fall from bicycle. Boys show higher prevalence than girls, in age group12 and 13.²³ Factors like protruded maxillary incisors and insufficient lip closure may affect the extent of the dental trauma. Other causes of avulsion may trauma due traffic accidents. Success of re implantation depends upon drying time and storage medium.⁴ Clinical evaluation of avulsed tooth studies have shown that immediate reimplantation is necessary for regeneration of periodontal ligament after reimplantation.⁵ Aim of the study was to evaluate the knowledge of school teachers and parents of students studying there and para medical staff of various hospital who arrive at accident site first, so that they should know what to do in case of tooth avulsion how it can be preserved. MATERIAL AND METHOD: A study was conducted in Susheela Tiwari Govt. Medical College Haldwani to the knowledge of tooth avulsion. For this a series of multiple choice question where designed among teachers of various schools parents of children (Prefebrally of age group 7 to 14 years) and para medical staff attending emergency of various hospitals in Haldwani region 656 people participated in the study that was given set of multiple choice question designed in Hindi and
English. Same set of question papers were given to all but they were marked for 3 group’s teachers’ parents and Para medical staff. Question paper was given Para medical staff teachers and students of same school and students where asked give question paper to their parent for their assessment of knowledge about the subject which was later collected from them and evaluation was done.

As health talk and awareness program tooth avulsion and its emergency management information was given to the participant to improve awareness through a power point presentation. Data collected was analyzed and better presentation reported in tabular form.

RESULT:
Question 1: When question was asked do they know about tooth avulsion.

| Paramedical (56) | Teachers (70) | Parents (530) |
|------------------|--------------|---------------|
|                  | Numbers    | %            | Numbers  | %          | Numbers | %          |
| Yes              | 40         | 71.42%      | 25      | 35.7%      | 159     | 30%        |
| No               | 16         | 28.57%      | 45      | 64.2%      | 371     | 70%        |
| **Total**        | **96**     | **171.41%** | **95**  | **135.6%** | **689** | **130%**   |

Table 1

71.42 % paramedics replied in yes while 28.57 replied in NO. 35. 7 % teacher replied in Yes and 64.2% said No among parents 30% said yes while 70% said NO (question 1)

Question 2: Can tooth re implantation be done? y/n.

| Paramedical (56) | Teachers (70) | Parents (530) |
|------------------|--------------|---------------|
|                  | Numbers    | %            | Numbers  | %          | Numbers | %          |
| Yes              | 32         | 57.14%      | 21      | 30%        | 142     | 26.79%     |
| No               | 24         | 42.85%      | 49      | 70%        | 388     | 73.20%     |
| **Total**        | **56**     | **99.99%**  | **70**  | **100%**   | **530** | **99.99%** |

Table 2

57.14 % said yes and 42.85%said NO among paramedics .30 % teachers said Yes and 70% said NO While 26.79% teachers yes while 73.20 % said NO.

Question 3: Critical time for avulsed tooth.

|                   | Paramedical (56) | Teachers (70) | Parents (530) |
|-------------------|------------------|--------------|---------------|
|                   | Numbers     | %            | Numbers   | %          | Numbers | %          |
| Less than 15 min  | 6           | 10.71%      | 10        | 14.28%    | 160     | 30.18%     |
| Less than 30 min  | 20          | 35.71%      | 15        | 21.43%    | 120     | 22.64%     |
| One hour          | 20          | 35.71%      | 20        | 28.57%    | 100     | 18.86%     |
| More than one hour| 7           | 12.50%      | 10        | 14.28%    | 40      | 16.98%     |
| Up to 24 hour or more | 3   | 5.35%      | 15        | 21.43%    | 10      | 11.32%     |
| **Total**         | **56**      | **99.99%**  | **70**    | **99.99%** | **530** | **99.98%** |

Table 3
Question 3: In answer to the question 3. A. For less than 15 min. 10.71% paramedics said for extra oral critical time for tooth avulsed tooth to be reimplanted. 14.28% teachers and 30% parents feel the same. For less than 30 min. 35.71% paramedics agreed, 21.43% teachers and 22.64% parents agreed. For more than one hour 12.5% for paramedics 14.28% for teachers and 16.98% parents. For more than 24 hours or more 5.35% paramedics, 21.43% teachers, 11.32% parents. For more than 60 min. 35.71% paramedics, 20.57% teachers, 18.86% parents agreed.

Though there is little difference in percentage among three groups for correct critical time for a avulsed tooth to remain extra orally. Closest where paramedics. Even then there is a need for so all three groups need to be made more aware critical time.

Question 4: Best medium for storage of avulsed tooth.

|                          | Paramedical (56) | Teachers (70) | Parents (530) |
|--------------------------|------------------|---------------|---------------|
|                          | Numbers         | %             | Numbers       | %             | Numbers       | %             |
| Water                    | 15              | 26.78%        | 20            | 28.57%        | 200           | 37.74%        |
| Normal saline            | 17              | 30.35%        | 25            | 35.71%        | 150           | 29.24%        |
| Milk                     | 13              | 23.21%        | 15            | 21.42%        | 70            | 13.21%        |
| Tissue culture medium (Hanks bank salt solution) | 7 | 12.5% | 5 | 7.14% | 30 | 4.72% |
| Ice                      | 4               | 7.14%         | 5             | 7.14%         | 80            | 15.09%        |
| **Total**                | **56**          | **99.98%**    | **70**        | **99.98%**    | **530**       | **99.99%**    |

Table 4

For water 26.78% Paramedics agreed, 28.57% teachers agreed, 37.74% parents agreed. For normal saline 30.35% of paramedics agreed, 35.71% of teacher, 29.24% of parents for milk 23.21% of paramedics, 21.42% of teachers, 13.21% of parents. ICE 7.14% of paramedics, 7.14% of teachers, 15.09% of parents, for tissue culture medium like (HBSS) 12.5% of paramedics, 7.14% of teachers, 4.72% of parents.

Question 5: If a tooth falls on ground and gets dirty then wash with.

|                          | Paramedical (56) | Teachers (70) | Parents (530) |
|--------------------------|------------------|---------------|---------------|
|                          | Numbers         | %             | Numbers       | %             | Numbers       | %             |
| Wash with water          | 20              | 35.71%        | 40            | 57.14%        | 190           | 35.85%        |
| With normal saline       | 24              | 42.85%        | 10            | 14.29%        | 130           | 24.53%        |
| Clean with gauge and cotton | 4           | 7.14%         | 15            | 21.43%        | 150           | 28.30%        |
| Wash with disinfectant (Betadine/savalon/sprit) | 8 | 14.28% | 5 | 7.14% | 60 | 11.30% |
| **Total**                | **56**          | **99.99%**    | **70**        | **99.99%**    | **530**       | **99.98%**    |

Table 5

With Water: 35.71% of Paramedics agreed, 57.14% of teachers agreed, 35.85% of parents agreed, wash with normal saline. 42.85% paramedics, 14.29% of teachers, 24.53% of parents.

Clean with Cotton: 14.28% of paramedics, 7.14% of teachers, 11.3% of parents Wash with disinfectant (betadine, savalon, sprit) 14.28% of paramedics, 7.14% of teachers, 11.3% of parents.
| Sl. No. | Question                                                                 | Paramedical(56) | Teachers (70) | Parents (530) |
|--------|---------------------------------------------------------------------------|----------------|---------------|---------------|
|        |                                                                           | Numbers | %       | Numbers | %       | Numbers | %       |
| 1      | Do they know What Tooth Avulsion is /fall out?                            |         |         |         |         |         |         |
|        | Yes                                                                       | 40      | 71.42%  | 25      | 35.7%  | 159     | 30%     |
|        | No                                                                        | 16      | 28.57%  | 45      | 64.2%  | 371     | 70%     |
|        | Total                                                                     | 56      | **171.41%** | 95     | **135.6%** | 689     | **130%** |
| 2      | Can tooth reimplantation be done? y/n                                      |         |         |         |         |         |         |
|        | Yes                                                                       | 32      | 57.14%  | 21      | 30%    | 142     | 26.79%  |
|        | No                                                                        | 24      | 42.85%  | 49      | 70%    | 388     | 73.20%  |
|        | Total                                                                     | 56      | **99.99%** | 70     | **100%** | 530     | **99.99%** |
| 3      | Critical time for avulsed tooth                                           |         |         |         |         |         |         |
| A      | Less than 15 min                                                          | 6       | 10.71%  | 10      | 14.28% | 160     | 30.18%  |
| B      | Less than 30 min                                                          | 20      | 35.71%  | 15      | 21.43% | 120     | 22.64%  |
| C      | One hour                                                                  | 20      | 35.71%  | 20      | 28.57% | 100     | 18.86%  |
| D      | More than one hour                                                        | 7       | 12.50%  | 10      | 14.28% | 40      | 16.98%  |
| E      | Up to 24 hour or more                                                     | 3       | 5.35%   | 15      | 21.43% | 10      | 11.32%  |
|        | Total                                                                     | 56      | **99.99%** | 70     | **99.99%** | 530     | **99.99%** |
| 4      | Best Medium for storage of avulsed tooth :                                |         |         |         |         |         |         |
| A      | Water                                                                     | 15      | 26.78%  | 20      | 28.57% | 200     | 37.74%  |
| B      | Normal saline                                                             | 17      | 30.35%  | 25      | 35.71% | 150     | 29.24%  |
| C      | Milk                                                                      | 13      | 23.21%  | 15      | 21.42% | 70      | 13.21%  |
| D      | Tissue culture medium (hanks bank salt solution)                          | 7       | 12.50%  | 5       | 7.14%  | 30      | 4.72%   |
| E      | Ice                                                                       | 4       | 7.14%   | 5       | 7.14%  | 80      | 15.09%  |
|        | Total                                                                     | 56      | **99.98%** | 70     | **99.98%** | 530     | **99.99%** |
| 5      | If a tooth falls on the ground and gets dirty then what should be done in that case? |         |         |         |         |         |         |
| A      | Wash with water                                                           | 20      | 35.71%  | 40      | 57.14% | 190     | 35.85%  |
| B      | With normal saline                                                        | 24      | 42.85%  | 10      | 14.29% | 130     | 24.53%  |
| C      | Clean with gauge and cotton                                               | 4       | 7.14%   | 15      | 21.43% | 150     | 28.30%  |
| D      | Wash with disinfectant (Betadine /savalon/sprit)                           | 8       | 14.28%  | 5       | 7.14%  | 60      | 11.30%  |
|        | Total                                                                     | 56      | **99.99%** | 70     | **99.99%** | 530     | **99.98%** |
CONCLUSION: Many teachers and parents don’t know about tooth avulsion which is very common among school children among 7 to 11 years. There is insufficient knowledge regarding tooth avulsion and first aid treatment these result where comparable to similar previous studies. Knowledge of tooth avulsion and its management is inadequate among para medical which were similar to findings of McCann et al.

From the above study. It can be conducted that there is lack of knowledge among school teachers parents and paramedical staff though paramedical staff is better off than two other groups.

Teachers in school and parents at home are the ones who spend their most of time with children so better knowledge of tooth avulsion would be of great help then in reorganizing the problem deal with them effectively and thus would be helping in preserving and conserving the tooth so to provide better knowledge about the subject educational program about tooth avulsion would be necessary.

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