

## 87 - SPORTS DENTISTRY: DENTAL AVULSION IN SPORTS PRACTICES AND REPLANTATION PROCEDURES , DO EDUCATORS KNOW WHAT TO DO TO SAVE THE TOOTH?

LUÍS FERNANDO SIMONETI  
BRUNA ALVES FURQUIM  
JOSÉ PAULO DE JESUS  
FÁBIO CAMPOS PIRES  
JOSÉ MARCOS SQUILACE<sup>1</sup>

UNIVERSIDADE DE CUIABÁ – CAMPUS TANGARÁ SUL, FACULDADE DE ODONTOLOGIA,  
TANGARÁ DA SERRA, MATO GROSSO, BRASIL

1 - Cirurgião Buco maxilo facial pelo Colégio Brasileiro de CTBMF, Hospital de Base de Bauru-SP  
fernandosimoneti4@hotmail.com

### INTRODUCTION

The dental replantation can be considered as the act of replacing a tooth removed from the alveolar accidentally or intentionally. The traumatic dental Injuries are common in young people, especially those which are in sports in general. The diagnosis and treatment of damaged teeth in sport activities have been widely studied in order that among these accidents, 4 to 18% are maxillofacial injuries (Marzola, 1997). Other studies also show that 13 to 39% of injuries to teeth are related to sports, thus becoming one of the sports activities main causes of dental trauma (Camp, 1991). Since children between 7-11 years of age are the most commonly affected by dental trauma in sport practices, physical education teachers, elementary teachers and middle school should be aware of the importance of emergency treatment and how proceed in cases of dental avulsion, as they often are the first contact with the victim of avulsion.

Studies demonstrates that time that the tooth remains outside the cavity, its integrity and the bone plates, presence or not of the periodontal fibers, through conservation of the tooth, oral infection, poor immobilization of implanted piece, the patient's age, the hyperocclusion of reimplanted tooth, lack of knowledge in providing the first aid, among other factors will define the successful treatment and if the prognosis is favorable or not. Whereas the loss of a tooth will result in physical and emotional changes due to break the harmony of the smile, and even affect the subsequent development of the arches and the malocclusion avulsion of the victim, becoming a difficult oral rehabilitation.

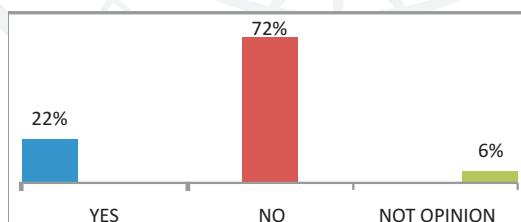
It is considered that dental reimplantation has a large mental, aesthetic and functional importance for the victim of dental avulsion, thus, is extreme importance the knowledge of educators and Physical education teachers on tooth avulsion and reimplantation technique, besides the proper conservation of tooth, for a favoring prognosis.

### METHODS

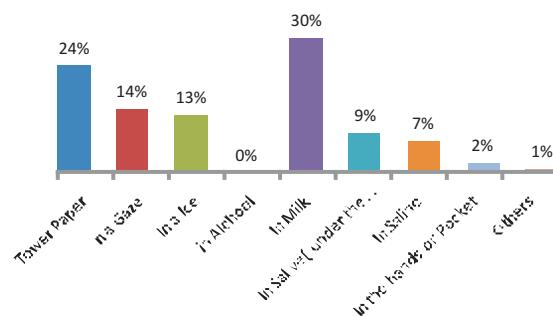
This research resulted the achievement of a study of field aimed at professionals and physical education, elementary school teachers, public and private schools from the city of Tangara da Serra in the state of Mato Grosso. The sample consisted of 130 randomly educators, where they answered a questionnaire containing 11 objective questions related to the topic. It is worth noting that this questionnaire was completed answered without scientific consultation, keeping the responses obtained in secrecy with the prior consent of the interviewees. During the research was not provided any information to participants who could change the outcome of study, but at the end of the questionnaire were explained the correct answers to the respondents, promoting knowledge towards avulsion and dental replantation. The data obtained were converted into percentages according to the frequency of distribution, expressed graphically through statistical analysis in percentage of responses encompassing the data obtained.

### RESULTS

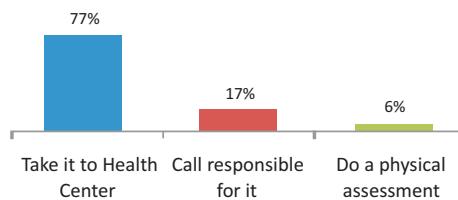
The results of the study realized with 130 educators of public and municipal high schools from the city of Tangara da Serra - MT are arranged in order of percentage through graphics containing the values of the data obtained from 11 questions, divided into several phases.



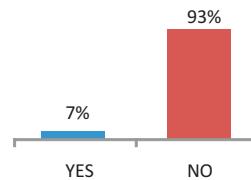
Graphic 1–Do you know what is dental avulsion ?



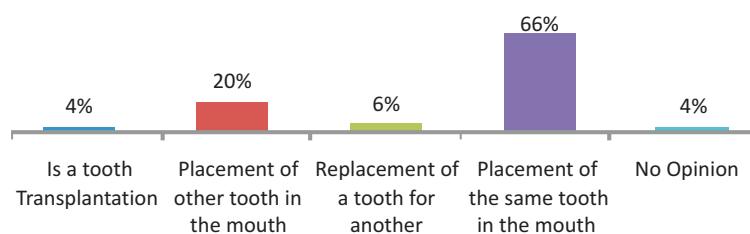
Graphic 2 - If a tooth get completely out of someone's mouth during a trauma, where do you put the tooth in question?



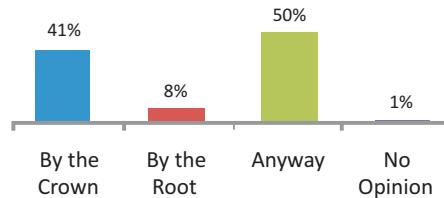
Graphic 3 - If someone suffers an injury on the face during any sporting activity, what is your first action?



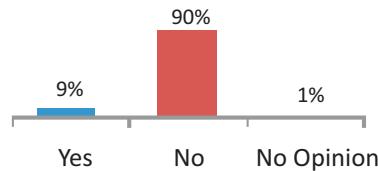
Graphic 4 - Do you think you are able to replace a tooth that came out of the mouth due to a trauma correctly in its place?



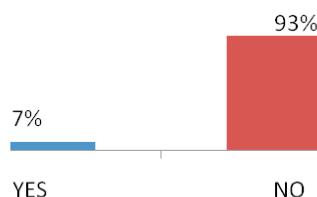
Graphic 5 - What is dental reimplantation for you ?



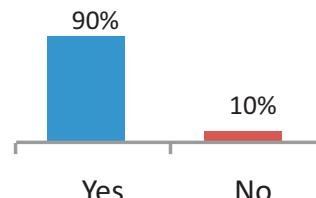
Graphic 6 - Where would you get the tooth that fell out of my mouth?



Graphic 7 - Have you received any information about tooth avulsion?



Graphic 8 - Have you already gave first aid to a victim of dental avulsion?



Graphic 9 - Do you consider important to receive information regarding avulsion and other dental injuries to your professional training?

## DISCUSSION

From the analysis of data obtained in the study, it was found that elementary school teachers from public and private schools in the city of Tangara da Serra - MT know about tooth avulsion and replantation procedures to save the avulsed tooth. When questioned, 72% did not know what dental avulsion was, 22% knew what it was, and 6% had no opinion. Analyzing Figure 4, 93% of respondents judged not able to immediately replace the avulsed tooth in its socket.

According to the authors (Andreasen; HJORTING-HANSEN, 1966; BARRY. 1983, Heimdahl et al., 1983) immediately replacement of tooth in the socket is still the best therapy in cases of avulsion. If reimplantation is not possible, the tooth should be picked up by the crown and never by the root. We found differences, as 50% of respondents would take the tooth anyway. The basic requirements for the success of replantation depends on the length of time the tooth is out of its socket (no more than two hours), and that the extra-alveolar storage be in physiological medium (LIA, Raphael Carlos Comelli, Kanaan, Delsa Deise Macchetti . 2007).

Although 30% of teachers have answered that would store tooth in milk, the best storage solution is saline, which would make it only 7%. The second option would be to put the tooth under the tongue of the patient, do not clean the teeth with chemicals such as antiseptics, cleaning agents, or brushing and scraping, and seek a dentist as soon as possible (MARZOLA, Clovis. Transplants and replantation, 2nd edition. São Paulo, Pancast, 1997.). Regarding the first approach to be taken because of a facial trauma during sports practice, 77% would take the victim to a health center, 17% would call somebody responsible for it and only 6% would do a physical assessment.

The psychological factor is perhaps, in our opinion, one of the most important for the realization of a reimplantation and the correct approach the victim (MARZOLA, 1988; TROMBELLi et al., 1992 and YLIPAAVALNIEMI et al., 1995). It is evident the unpreparedness of the respondents in the approach of a victim of avulsion, because the right conduct would be first a physical assessment, noting that it has lost some movement, if it presents nausea or headache, loss of consciousness or symptoms that would indicate more serious commitment.

It was found that most teachers, 66% knew the correct meaning of dental replantation, which would be the replacement of one tooth in the mouth, 20% answered that it is putting another dent in the mouth, 6% it was a replacement of a tooth by another 4% says it is the transplantation of a tooth and another 4% had no opinion. In sports practice the accidents in swimming pools are one of the most frequent (19 to 39%), followed by activities such as physical contact sport (football, basketball) and currently (roller and skate) (Van Waes, 1993). From the literature we can see how great is the involvement of professionals in physical education and elementary school teachers for the victim of dental avulsion, and 12% of the respondents have already provided first aid to a victim of dental avulsion in the school. Araujo, Valera (1999) reports that the center of dental trauma at UNESP (Sao Jose do Rio Preto) during the period of two years of rating, the age of greatest incidence of injuries was 7 to 13 years, evidencing more once again the importance of knowledge towards the dental avulsion and replantation of tooth procedures since 90% of respondents agreed that these skills should be part of their professional resume.

The disagreement observed between this study and those found in the literature are due possibly to the fact that the respondents have never had access to the information of behavior in the respect of the dental avulsion, since 90% of respondents had never received information about the topic and only 9% received information about dental avulsion and the correct procedures for dental reimplantation.

## CONCLUSION

It is concluded that physical education professionals and elementary school teachers in the city of Tangará da Serra - MT does not have necessary knowledge when it comes to dental avulsion and reimplantation procedures to save the tooth.

## BIBLIOGRAPHY

- ARAUJO MAM, Valera M. **Tratado clínico dos traumatismos dentários.** São Paulo, Artes Médicas, 1999.
- ANDREASEN, J. O.; HJORTING-HANSEN, E. **Replantation of teeth. I. Radiographic and clinical study of 110 human teeth replanted after accidental loss.** Acta odont. Scand., v. 24, p. 263-86, 1966.
- BARRY, G. N. In: GROSSMAN, L. I. **Endodontia prática.** 10<sup>a</sup> ed., Rio de Janeiro: Ed. Atheneu, 1983.
- CAMP.J.H. **Diagnóstico e tratamento das lesões dos dentes em atividades desportivas.** Clin. Odont. Amér. Norte, v. 4, p. 749-774, 1991.
- HEIMDAHL, A.; VON KONOW, L.; LUNDQUIST, G. **Replantation of avulsed teeth after long extra-alveolar periods.** Int. J. oral Surg., v. 12, p. 413-7, 1983.
- LIA, Raphael Carlos Comelli; KANAAN, Delsa Deise Macchetti. **Atualização Clínica em Odontologia: Traumatismos dos dentes Permanentes dos Jovens.** p. 456-498. 25º CIOSP. São Paulo: Artes Médicas, 2007.
- MARZOLA, Clóvis. **Transplantes e Reimplantes.** 1<sup>a</sup> Ed. São Paulo: Pancast, 1988.
- MARZOLA, Clóvis. **Transplantes e Reimplantes.** 2<sup>a</sup> Ed. São Paulo: Pancast, 1997.
- TROMBELLi, L. et al. **Reimpimento post-traumático – Biologia e Clínica.** Dental Cadmos, v.60, p.54-64, 1992.
- VAN WAES H. **Fullungstherapie Karioser Milchmolaren: Materialien und Methoden.** Schweiz Monatsschr Zahnmed. V 103, p 947-57, 1993.
- YLIPAAVALNIEMI, P. et al. **Risk personality leads to traumatic injuries. A controlled study among university students.** Congresso Mundial de Cirurgia em Budapeste, Hungria, 1995.

Endereço: Rua José Flauzino de Oliveira, Número: 277-E, Centro  
Tangará da Serra, Mato Grosso, CEP: 78-300-000.

[fernandosimoneti4@hotmail.com](mailto:fernandosimoneti4@hotmail.com)

## SPORTS DENTISTRY: DENTAL AVULSION IN SPORTS PRACTICES AND REPLANTATION PROCEDURES , DO EDUCATORS KNOW WHAT TO DO TO SAVE THE TOOTH?

### ABSTRACT

The aim of this study was to research the level of knowledge of physical education professionals and educators of the public and private schools of the city of Tangará-MT towards tooth avulsion and the procedures of reimplant, raising a holistic view through information, contributing to save the tooth. Since the practice of sport in schools contribute to an increasing prevalence of dental trauma, these professionals surveyed are closely related to the victims of dental avulsion and do not have the necessary knowledge to provide first aid and perform dental reimplantation and not contributing to a favorable prognosis. It was interviewed 130 teachers through a multiple choice questionnaire, focusing on the knowledge of immediate help in cases of dental avulsion. The data showed that 72% of interviewed. did not know what is avulsion. Regarding the storage way of avulsed tooth, milk was

elected by 30% of respondents as the best means of storage, but the saline solution is the most suitable being chosen by only 7% of interviewed. 93% of teachers would be unable to reimplant the avulsed tooth correctly as well they would not know how to get the tooth, and 50% would take the tooth anyway, being most indicated pick up the tooth by the crown with 41% of interviewed. We conclude that the majority of interviewed unaware the dental avulsion in sport and reimplantation procedures, as well as the approach to victims of avulsion. The interviewers also find it important to have in their academic information about the topic since most have never received any information which would help save the tooth.

**KEYWORDS:** tooth avulsion, teachers and sporting

#### **LA DENTISTERIE SPORTIVE: AVULSION DENTAIRE PENDANT LES PRATIQUES SPORTIVES ET PROCÉDÉS DE RÉIMPLANTATION, LES PROFESSEURS (ÉDUCATEURS) SAVENT QUE FAIRE POUR SAUVER LA DENT?**

##### **RÉSUMÉ**

Le but de cette étude fut de rechercher le niveau de connaissance des professionnels de l'éducation physique et des éducateurs de l'enseignement de base des écoles publiques et privées de la ville de Tangará da Serra-MT concernant l'avulsion dentaire et les procédés de réimplantation soulevant une approche holistique par le biais d'informations, aidant à sauver la dent. Puisque les pratiques sportives dans les écoles contribuent à une augmentation de traumatismes dentaires, ces professionnels interrogés sont étroitement liés aux victimes d'avulsion dentaire et n'ont cependant pas les connaissances nécessaires pour prodiguer les premiers soins et effectuer une réimplantation dentaire ne contribuant pas à un pronostic favorable. 130 professeurs ont été interrogés par un questionnaire à choix multiples, mettant l'accent sur la connaissance concernant une aide immédiate (un secours immédiat) en cas d'avulsion dentaire. Les données montrent que 72% des répondants ne savaient pas ce qui est avulsion. En ce qui concerne le stockage de la dent avulsée, le lait a été élu par 30% des répondants comme le meilleur moyen de stockage, cependant la solution saline est la plus appropriée, n'étant choisie que par 7% des interrogés. 93% des professeurs ne seraient pas en mesure de réimplanter la dent avulsée correctement et ne savaient pas comment obtenir la dent, et 50% prendrait la dent de n'importe quelle façon, la façon la plus indiquée étant celle de prendre la dent de la couronne dentaire (41% des répondants).

Nous concluons que la majorité des répondants ignorent l'avulsion dentaire concernant les pratiques sportives et les procédés de réimplantation, ainsi que l'accueil des victimes d'avulsion. Les interviewés trouvent aussi qu'il est important pour leurs études d'avoir des informations sur le sujet traité puisque la plupart d'entre eux n'ont jamais reçu aucune information qui pourrait aider à sauver la dent.

**MOTS-CLÉS:** avulsion dentaire, professeurs et les pratiques sportives

#### **ODONTOLOGÍA DEPORTIVA: AVULSIÓN DENTAL EN LAS PRÁCTICAS DEPORTIVAS Y PROCEDIMIENTOS DE REIMPLANTE, LOS EDUCADORES SABEN QUÉ HACER PARA SALVAR UN DIENTE?**

##### **RESUMEN:**

El objetivo del presente trabajo fue investigar el nivel de conocimiento de los profesionales de Educación Física y de profesores de Educación Básica de las escuelas públicas y privadas de la ciudad de Tangará da Serra – MT, frente a la avulsión dental y a los procedimientos de reimplantación, despertando una visión holística a través de informaciones, contribuyendo a salvar el elemento dental. Debido a que las prácticas deportivas en las escuelas contribuyen a un creciente aumento de casos de traumatismo dental, estos profesionales encuestados, están íntimamente relacionados a las víctimas de avulsión dental y no poseen el conocimiento necesario para prestar los primeros auxilios y realizar el reimplante dental, lo cual desfavorece a un pronóstico favorable. Fueron encuestados 130 profesores, por medio de un cuestionario de elección múltiple, enfocándose en los conocimientos de socorro inmediato en los casos de avulsión dental. Los datos demostraron que 50 (72%) de los encuestados no saben lo que es la Avulsión. Con respecto al medio de almacenaje del diente avulsionado, la leche fue elegida por 21 (30%) de los encuestados como el mejor medio de almacenaje, aunque el suero fisiológico es el más indicado y siendo escogido por apenas 5 (7%) de los encuestados. 65 ( 93%) de los profesores no son capaces de reimplantar el diente avulsionado correctamente, como también no saben recolectar el diente, 35 (50%) lo recogen de cualquier forma, siendo que la forma más indicada es tomar el diente por la corona con 41 % de las respuestas.

Se concluyó que la mayoría de los encuestados desconoce la avulsión dental en las prácticas deportivas y los procedimientos de reimplante, así como el abordaje de la víctima de avulsión. Los encuestados encuentran importante tener en su formación académica informaciones sobre el tema, debido a que la mayoría nunca recibió información que contribuyese a salvar el elemento dental.

**PALABRAS CLAVES:** Avulsión Dental, Profesores y Prácticas Deportivas.

#### **ODONTOLOGIA DESPORTIVA: AVULSAO DENTAL NAS PRÁTICAS ESPORTIVAS E PROCEDIMENTOS DE REIMPLANTE, OS EDUCADORES SABEM O QUE FAZER PARA SALVAR O DENTE?**

##### **RESUMO**

O objetivo deste trabalho foi pesquisar o nível de conhecimento dos profissionais de educação física e educadores do ensino fundamental de escolas públicas e privadas da cidade de Tangará da Serra-MT frente à avulsão dental e aos procedimentos de reimplante, despertando uma visão holística, através de informações, contribuindo para salvar o elemento dentário. Visto que as práticas desportivas nas escolas contribuem para um crescente aumento de casos de traumatismo dental, estes profissionais pesquisados estão intimamente relacionados as vítimas de avulsão dental e não possuem o conhecimento necessário para prestar os primeiros socorros e realizar o reimplante dental, não contribuindo para um prognóstico favorável. Foram entrevistados 130 professores, por meio de um questionário de múltipla escolha, enfocando os conhecimentos de socorro imediato nos casos de avulsão dental. Os dados demonstraram que 72% dos entrevistados não sabem o que é avulsão. A respeito do meio de armazenagem do dente avulsionado, o leite foi eleito por 30% dos pesquisados como melhor meio de armazenagem, porém o soro fisiológico é o mais indicado, sendo apenas escolhido por 7% dos entrevistados. 93% dos professores não seriam capazes de reimplantar o dente avulsionado corretamente, bem como não sabiam como pegar o dente, sendo que 50% pegariam o dente de qualquer forma, já que a forma mais indicada é pegá-lo pela coroa com 41% das respostas.

Conclui-se que a maioria dos entrevistados desconhece a avulsão dental nas práticas desportivas e os procedimentos de reimplante, bem como a abordagem a vítima de avulsão. Os entrevistados ainda acham importante terem na sua formação acadêmica informações sobre o tema abordado, visto que a maioria nunca recebeu nenhuma informação que contribuisse para salvar o elemento dental.

**PALAVRAS-CHAVE:** Avulsão dental, professores e práticas desportivas