OCCURRENCE OF NAIL BITING AMONG ATHLETES IN GRASSROOTS FOOTBALL

Ocorrência de onicofagia entre atletas de futebol de base

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ABSTRACT

Introduction: Nail biting is related to a high degree of anxiety and low self-esteem and has various repercussions. Objective: The present study aimed to detect the occurrence of nail biting among athletes of football (soccer) in order to determine possible causes of muscle imbalance, headaches, discomfort and stress that compromise athletic performance and indicate psychological problems and an inability to cope with pressure during training and games. Methods: The present study was carried out at the São Paulo Futebol Clube, São Paulo, Brazil, involving 64 athletes of football between 13 and 20 years of age. They were interviewed and clinically visually examined for the detection of the occurrence of nail biting. Results: Among the 64 athletes interviewed and examined, 47 (73.5%) had the habit of nail biting. Discussion: Malocclusion is the most frequent result of finger sucking and nail biting, especially when these habits are prolonged. Parafunctional activities can overload the masticatory system. Nail biting can affect the performance of an athlete in terms of dental aspects, with the presence of temporomandibular disorder and malocclusion, as well as in psychological terms, dem-
onstrating insecurity and an excess of demands. **Conclusion:** Based on the present study, planning strategies, multidisciplinary intervention and the organization of educational lectures are being adopted to discuss the harmful repercussions of this habit for athletes, trainers and other professionals involved in grassroots football.

**Key Words:** Nail Biting, Malocclusion, Temporomandibular Joint, Athletic Injuries.

**RESUMO**

**Introdução:** A onicofagia é relacionada a um alto grau de ansiedade e baixa auto-estima e apresenta diferentes repercussões no organismo, representa uma atividade parafuncional. **Objetivo:** O presente estudo investigou a ocorrência de onicofagia entre os atletas de futebol de campo, a fim de determinar as possíveis causas de desequilíbrio muscular, dores de cabeça, desconforto e estresse que prejudicam o desempenho do atleta e indicam problemas psicológicos e uma incapacidade de lidar com a pressão durante o treino e competições. **Métodos:** O presente estudo foi realizado no São Paulo Futebol Clube, São Paulo, Brasil, envolvendo 64 atletas de futebol entre 13 e 20 anos de idade. Eles foram entrevistados e clinicamente examinadas visualmente para a detecção da ocorrência de roer as unhas. **Resultados:** Entre os 64 atletas entrevistados e examinados, 47 (73,5%) tinha o hábito de roer as unhas. **Discussão:** Má oclusão é o resultado mais frequente de sucção de polegar e onicofagia, especialmente quando esses hábitos acompanham o indivíduo por um longo prazo. Atividades parafuncionais podem sobrecarregar o sistema mastigatório. A onicofagia pode afetar o desempenho de um atleta tanto em aspectos odontológicos, com a presença de disfunção temporomandibular e a má oclusão, bem como em termos psicológicos como insegurança, demonstrando um excesso de demandas. O objetivo foi chamar a atenção para este mau hábito oral, o que prejudica o condicionamento físico e psicológico necessário para a obtenção de resultados satisfatórios. **Conclusão:** Com base no estudo, estratégias de planejamento, intervenção multidisciplinar e da organização de palestras educativas estão sendo adotadas para discutir as repercussões nocivas deste hábito para atletas, treinadores e outros profissionais envolvidos no futebol de formação.

**Palavras-chave:** onicofagia, má oclusão, articulação temporomandibular, traumatisms em atletas.
INTRODUCTION

Sucking is common action of children during breastfeeding. This function is vital at the beginning of life and generally diminishes in frequency over time. However, when this action becomes exacerbated with no functional purpose, as in the case of finger or pacifier sucking, such habits are harmful to the stomatognathic system, which then undergoes alterations that are reflected in the dental structures, muscles and joints of this system (SOUSA et al., 2010; WINOCUR et al., 2006). The identification of malocclusion and parafunctional habits is fundamental to the early diagnosis of problems in the temporomandibular joint in order to avoid dysfunctions in the stomatognathic system (CORVO et al., 2003).

Children often abandon non-nutritive sucking habits only to adopt the habit of nail biting as a means to alleviate stress and anxiety. Nail biting is common among children, adolescents and adults alike and pertains to the group of parafunctional habits that also allow alleviating loneliness and inactivity among children with inadequate feelings of security, love and close relationships (PACAN et al., 2009). Nail biting has different clinical symptoms depending on the degree and form of the injuries produced. It may be explained as a kind of compulsion (WILLIAMS, ROSE, CHISHOLM, 2006). Nail biting is easily recognized and may occur in a continual flow running from mild to severe (PACAN et al., 2009).

Nail biting may be caused by excessive stimulation due to stress or excitation or by under-stimulation due to boredom and inactivity. It is also suggested to be related to a high degree of anxiety and low self-esteem (JOUBERT, C.E, 1993). It cannot be considered merely a dermatological or esthetic problem (PACAN et al., 2009) as it has various repercussions, especially with regard to dental aspects. Studies have shown that malocclusion is the most frequent result of finger sucking and nail biting, especially when these habits are prolonged (BRENCHLEY, 1992). Such parafunctional activities can overload the masticatory system and lead to temporomandibular disorder (KALAYKOVA, LOBBEZOO, NAEIJE, 2011; MICHELOTTI et al.; 2009; WINOCUR et al., 2006).

Among the different oral parafunctional habits, grinding/clenching the teeth and nail biting are the most commonly reported (FETEIH, 2006; RICHERT; ANDRE, 2011). Incisor clenching provoked by nail biting has been reported to cause a reduction in space, followed by compression of the disc of the temporomandibular joint (PEREIRA et al., 2010; TAKENAMI et al., 1999). In Brazil, a study on orofacial pain reports that nail biting accounts for approximately
20% of parafunctional habits (ROCHA, MENDONÇA, ALENCAR JUNIOR, 2007). In the practice of sports, nail biting can affect the performance of an athlete in terms of dental aspects, with the presence of temporomandibular disorder and malocclusion, as well as in psychological terms, demonstrating insecurity and an excess of demands.

OBJECTIVE

The present study aimed to detect the occurrence of nail biting among athletes of football (soccer) of the São Paulo Futebol Clube (São Paulo, Brazil) in order to determine possible causes of muscle imbalance, headaches, problems with the temporomandibular joint, discomfort and stress that compromise athletic performance and indicate psychological problems and an inability to cope with pressure during training and games. The additional purpose was to draw attention to this oral habit, which impairs the physical and psychological conditioning necessary to the achievement of satisfactory results.

METHODS

The present study was carried out at the São Paulo Futebol Clube, São Paulo, Brazil, involving athletes of football between 13 and 20 years of age lodged at the Athlete Training Center of the municipality of Cotia, where the athletes receive assistance in medicine, physiology, physical education, nutrition, psychology and dentistry as well as pedagogical guidance. Sixty-four athletes were interviewed and visually examined for the detection of the occurrence of nail biting. The study received approval from the Ethics Committee of the School of Dentistry of the Universidade de São Paulo (Brazil) (FR 255627 process number: 75/2009). The results were tabulated, organized and analyzed by descriptive analysis.

RESULTS AND DISCUSSION

We found that among the 64 athletes interviewed and visually examined, 47 (73.5%) had the habit of nail biting.

The lack of scientific information and evidence in the literature suggests that nail biting does not have serious effects on the dentition,
Even considering its duration, frequency and intensity (RICHERT; ANDRE, 2011; TANAKA et al., 2008). However, researchers stress the need to pay greater attention to nail biting as well as its consequences to dental aspects and its psychological implications (BATE et al., 2011; CORVO et al., 2003; FETEIH, 2006; PACAN et al., 2009; SCHNEIDER; PETERSON, 1982). The overload of a muscle or specific group of muscle fibers, as occurs when one acquires inadequate postural habits or develops parafunctional activities such as nighttime or daytime bruxism (teeth clenching/grinding), nail biting, lip biting or gum chewing, compromises the correct functioning of the temporomandibular joint, thereby affecting mastication and causing pain and discomfort (HOU et al., 2002).

Among the adolescent athletes between 13 and 20 years lodged far from their families and under psychological pressure (as many represent familial expectations for a better life), nail biting was present at an alarming proportion, as demonstrated by the 73% occurrence of this habit. In contrast, the literature reports rates ranging from 20 to 35% (ABDEL-HAKIM; ALSALEM; KHAN, 1996; Farsi, 2003; LEUNG; ROBSON, 1990; ROCHA et al., 2007).

Nail biting not only provokes injuries, but affects the concentration, thereby compromising the physical performance of an athlete (BENSON e et al., 1999; COTO et al., 2007; CROW, 1991; LEVIN; JEFFET; ZADIK, 2010). Nail biting may caused by an excess of stimulation due to stress or excitation (WILLIAMS et al., 2006) and is also related to low self-esteem (JOUBERT, C. E., 1993; LEUNG; ROBSON, 1990).

According to Schneider & Peterson (1982), with greater family closeness within the comfort of the home or even outside the home, anxiety and tension can be more easily released in order to preserve the physical and psychological integrity of an individual as much as possible. Adolescents should be reeducated, with the encouragement of healthy habits and self-awareness, as there is no more effective, intelligent and satisfactory manner to put an end to this harmful habit. Nail biting remains an unsolved problem in medicine and dentistry. It is difficult to analyze and differentiate what is normal from what is abnormal in nail biting and a multidisciplinary approach to treatment is necessary (BOURZGUI et al., 2010; TANAKA et al., 2008).
CONCLUSION

Due to the considerable occurrence of nail biting among athletes of football at the club surveyed, the results of the present study will lead to strategies, multidisciplinary intervention and the organization of educational lectures to discuss the harmful repercussions of this habit for athletes, trainers and other professionals involved in grassroots football.

REFERENCES


