

The importance of the dentist in paralympic sports

A importância do dentista no esporte paralímpico

La importancia del dentista en el deporte paralímpico

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Abstract

Sports dentistry aims to promote health, improve performance and prevent injuries in athletes. It is necessary for the dental surgeon to participate in the routine of athletes from the youth categories, including athletes with intellectual, physical and visual disabilities, this group presents several changes in the oral cavity because of their limitations. The participation of the Brazilian team in the Paralympic Games since 1972, became essential to evaluate oral health problems in these athletes and rehabilitate them, providing better results in competitions. Methodology: 20 articles were selected between 2005 and 2021, indexed in the Pubmed, scholar and lilacs database, using the descriptors "Dentistry", "Oral health", "Sports Medicine", "Disabled Persons" and "Sports for Persons with Disabilities". Oral injuries in Brazilian para-athletes, bruxism, mouth breathing and recurrent oral herpes lesions are the most frequent problems and can negatively affect the performance of these athletes. There is a high need dental care practices for patients with special needs at the University Dentistry. There was a significant need for attention and dental treatment for athletes with intellectual disabilities, and it is important to invest in strategies that promote self-care in order to improve daily hygiene. It is necessary for dental surgeons to work in Paralympic sports, meeting the individual needs of athletes with access to quality oral health and adequate monitoring, in order to improve performance and avoid complications that affect the quality of sports practice. The objective for this article is review the literature on the importance of dental surgeons in Paralympic sports.

Keywords: Dentistry; Oral health; Sports for persons with disabilities; Disabled persons; Sports medicine; Disabled persons.

Resumo

A odontologia esportiva tem como objetivo promover a saúde, melhorar o desempenho e prevenir lesões em atletas. É necessária a participação do cirurgião-dentista na rotina de atletas das categorias juvenis, inclusive atletas com deficiência intelectual, física e visual, esse grupo apresenta diversas alterações na cavidade oral devido suas limitações. A participação da seleção brasileira nos Jogos Paralímpicos, desde 1972, tornou-se essencial para avaliar problemas de saúde bucal nesses atletas e reabilitá-los, proporcionando melhores resultados nas competições. Metodologia: foram selecionados 20 artigos entre 2005 e 2021, indexados nas bases de dados Pubmed, Scholar e Lilacs, utilizando os descritores "Odontologia", "Esporte para pessoas com deficiência", "Medicina Esportiva", "Saúde Oral" e "Deficiência Física". Lesões orais em atletas com deficiência, bruxismo, respiração bucal e lesões recorrentes de herpes oral são os problemas mais frequentes e podem afetar negativamente o desempenho desses

atletas. É grande a necessidade de práticas de atendimento odontológico para pacientes com necessidades especiais na graduação de Odontologia. Há necessidade de atenção e tratamento odontológico para atletas com deficiência intelectual, sendo importante investir em estratégias que promovam o autocuidado para melhorar a higiene diária. É necessário que o cirurgião-dentista atue nos esportes paralímpicos, atendendo às necessidades individuais dos atletas com acesso à saúde bucal de qualidade e acompanhamento adequado, a fim de melhorar o desempenho e evitar complicações que afetem a qualidade da prática esportiva. O objetivo desse artigo é revisar na literatura a importância do cirurgião dentista no esporte paralímpico.

Palavras-chave: Odontologia; Esporte para pessoas com deficiência; Medicina esportiva; Saúde oral; Deficiência física.

Resumen

La odontología deportiva tiene como objetivo promover la salud, mejorar el rendimiento y prevenir lesiones en los deportistas. Es necesario que el odontólogo participe en la rutina de los deportistas de las categorías juveniles, incluidos los deportistas con discapacidad intelectual, física y visual, este grupo presenta varios cambios en la cavidad bucal debido a sus limitaciones. La participación de la selección brasileña en los Juegos Paralímpicos, desde 1972, se volvió fundamental para evaluar los problemas de salud bucal de estos atletas y rehabilitarlos, proporcionando mejores resultados en las competiciones. Metodología: fueron seleccionados 20 artículos entre 2005 y 2021, indexados en las bases de datos de datos de Pubmed, Scholar y Lilacs, utilizando los descriptores "Odontología", "Deporte para personas con discapacidad", "Medicina deportiva", "Salud bucal" y "Discapacidad física". Las lesiones bucales en deportistas discapacitados, el bruxismo, la respiración bucal y las lesiones recurrentes de herpes bucal son los problemas más frecuentes y pueden afectar negativamente al rendimiento de estos deportistas. Existe una gran necesidad de prácticas de atención odontológica para pacientes con necesidades especiales en la licenciatura en Odontología. Existe una necesidad de atención y tratamiento odontológico para los deportistas con discapacidad intelectual, y es importante invertir en estrategias que promuevan el autocuidado para mejorar la higiene diaria. Es necesario que el cirujano dentista actúe en los deportes paralímpicos, atendiendo las necesidades individuales de los deportistas con acceso a una salud bucal de calidad y un seguimiento adecuado, para mejorar el rendimiento y evitar complicaciones que afecten la calidad de la práctica deportiva. El objetivo de este artículo es revisar la importancia del cirujano dentista en el deporte paralímpico en la literatura.

Palabras clave: Odontología; Deporte para personas con discapacidad; Medicina deportiva; Salud bucal; Deficiencia física.

1. Introduction

Sports Dentistry is one of the branches of dentistry that seeks to enhance performance, prevent injuries, and promote health, while also involving other professionals for a multidisciplinary approach (Pastore et al, 2017).

The inclusion of a dental surgeon in the sports context, focusing on prevention, diagnosis, and treatment of oral diseases in athletes is important. Poor oral health impact athlete activities and sports performance, with caries, dental erosion, and periodontal problems being the most common among the sports community, along with preventable traumas with the use of protective devices (Andrade et al, 2010).

There is need to expand dental services for athletes with disabilities, as the oral health status of this group has shown a high level of oral cavity problems compared to athletes without disabilities (Al-Shamlan et al., 2019).

People with disabilities have poorer oral health due to inadequate oral hygiene and a higher incidence of traumatic dental injuries compared to those without disabilities. This poor oral health is why to the difficulties they face in accessing dental treatment, including costs, transportation, fear of dental visits, and, most importantly, a low number of dentists specializing in this population (Petersen et.al, 2005).

To integrate and rehabilitate the psychological and physical conditions of people with disabilities, it was necessary to adapt sports, leading to a significant increase in the number of athletes participating in the Paralympic Games. Brazil has been participating in every edition since 1972 and has been increasing its medal count, which underscores the need for more extensive studies on the subject (Cardoso, 2011).

The high rates of oral health problems found in Paralympic athletes emphasize the need for greater prevention and oral health restoration for individuals with intellectual and motor disabilities (Hanke-Herrero et al, 2010). The objective for this article is review the literature on the importance of dental surgeons in Paralympic sports.

2. Methodology

This article is a narrative type review according to the author Pereira et al. (2018).

This review made through searches in the Pubmed, Scholar, and Lilacs databases. The keywords "Dentistry," "Parathletes," "Sport dentistry," "Oral health," and "Physical disability" were used, and articles published between 2005 and 2021 were included. The selected terms described in DeCS. Inclusion criteria were articles discussing the importance of dental surgeons in Paralympic sports. Articles not addressing the topic excluded, resulting in the selection of 17 articles.

3. Literature Review

After a long process of preparation, effort, and sacrifice to achieve a goal, athletes seek to improve their performance in games and competitions to ensure that these results did not compromised. In Sports Dentistry, according to Pastore et al, dental surgeons should be involved in athletes' lives from the initial to high-performance professionals because of the interaction between oral and systemic health, which, when deficient, can affect their performance. Many clubs and sports associations outsource dental care, leading to insufficient interaction between the dentist and the medical department, which puts the athlete at risk, as communication between specialties is fundamental.

The dentist's role within a multidisciplinary team is to promote health preventively and therapeutically to reduce the number of microorganisms that enter the rest of the body, as the athlete is a human asset to the club. This reduces muscular, joint, and ligament injuries throughout the athlete's sports career. Communication channels and the dental surgeon are responsible for disseminating knowledge and informing ways to prevent dental accidents in sports, such as encouraging the use of mouthguards. Additionally, this encouragement will lead to a reduction in accidents and ensure the protection of players in team and contact sports.

There has been a growth in Paralympic sports in recent years, accompanied by thousands of people worldwide. Waldman et al identified the need to expand dental services for athletes with disabilities. Due to few dental services for patients with special needs, they conducted a literature review to present dentists with the need to expand dental services for these patients, sharing the direction taken by the Special Smiles program of Special Olympics and addressing the need to educate athletes with special needs about oral injury prevention and care related to sports.

Special Smiles, in collaboration with Special Olympics, initiated an approach 20 years ago with the aim of increasing oral health services for individuals with intellectual and developmental disabilities, emphasizing that sports can enhance awareness programs for dental services. The Special Olympics program is the world's largest sports organization for children and adults with intellectual disabilities, providing year-round training and competitions for over 4.2 million athletes in 170 countries. The Healthy Athletes program started in 1994 with a focus on athletes' oral health. The Special Smiles program, part of the Healthy Athletes program, provides comprehensive information about oral health, including dental examinations and instructions on oral hygiene techniques for participating athletes, along with the distribution of preventive supplies such as toothpaste, toothbrushes, and dental floss. Athletes in need of dental care and follow-up go to local oral health professionals.

During the study, researchers found that using mouthguards during sports that pose a risk of oral fractures significantly prevent orofacial injuries. Studies have shown that the number and severity of injuries are reduce with the use of mouthguards, and the use of these devices should be encouraged among athletes with special needs. Based on studies

confirming the preventive effectiveness of mouthguards, a mouthguard program implemented for athletes competing in the Special Olympics.

4. Results and Discussion

Storrer et. al administered a questionnaire with various questions to athletes with disabilities, dividing them into three categories based on previous competition results: high, medium, and low performance levels. The total 370 athletes were included in the study, with ages ranging from 14 to 79 years. 41.5% of individuals reported previous sports-related injuries, 38.4% had bruxism, and 16.2% had recurrent oral herpes lesions, which were associated with mouth breathing or not. Recurrent herpes episodes related to stress and anxiety, with these lesions being more frequent when athletes are preparing for competitions, negatively affecting their performance. Therefore, they concluded that the type of bruxism and breathing were associated with oral herpes lesions in Brazilian para-athletes.

According to Waldman et. al, undergraduate dentistry programs should address dental care practices for patients with special needs to understand their specificities for better individualized treatment. This includes promoting oral hygiene practices and dental follow-up to prioritize the overall oral and general.

5. Final Considerations

Greater encouragement and access to quality oral health are essential for athletes with disabilities, with appropriate follow-up, to preserve or enhance their performance without setbacks from oral health complications. This underscores the importance of having a qualified Sports Dentistry dental surgeon as part of the multidisciplinary team responsible for the athlete's.

This article made clear the need for in-depth studies on this topic to be carried out as this area is constantly evolving and scientific evidence is extremely important.

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