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ODONTOLOGICAL APPROACH ON THE ORAL HYGIENIZATION IN PATIENTS WITH MOTOR DEFICIENCY

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ABSTRACT

Motor deficiency corresponds to a congenital or acquired dysfunction that affects the individuals' motility (mobility, coordination, speech). Many patients with motor deficiency present deficient oral hygiene because they depend on caregivers to perform it, which is not always an easy task, often lacking adequate knowledge, skills, method, and instruments. The dentist is the professional specialized and responsible to train and promote the education of appropriate form of caregivers and parents and people with motor disabilities to perform a quality oral hygiene in the best possible way. This study aims to describe the dental approach to the oral hygiene of individuals with motor deficiency. It can be concluded that the responsibility for the hygiene of patients with motor deficiency is most often borne by family members, especially mothers and caregivers, but is shared in a way with the dentist who is responsible for directing programs and educational interventions and training to fathers mothers and caregivers in order to properly guide the use of the brush, number of day brushing, flossing of mouth openers how to make a mouth opener, strips your doubts and above all build a trustworthy relationship, from mutual knowledge and support. Because many family members often do not perform oral hygiene adequately due to lack of motivation, support, guidance from a professional specialized in this area.

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INTRODUCTION

According to the study of the global disability situation, the oral health of many disabled individuals is poor and access to dental care is limited (COLLADO, 2013). The Notebook of Basic Attention, n. 17 of Oral Health defines a patient with special needs, p.67: "In dentistry, any patient who has one or more temporary, permanent, mental, physical, sensory, emotional, growth or medical limitations that prevent him or her from undergoing a conventional dental situation is considered a patient with special needs" (BRASIL, 2008). Motor deficiency corresponds to a congenital or acquired dysfunction that affects individuals' mobility (mobility, coordination, speech) (OLIVEIRA, 2012). The deficient motor is any and all people who present, in a transient or permanent way, any type of change in their musculoskeletal system, compromising their daily functionality. For many patients especially children, motor impairment is innate, that is, from birth, and caused by lack of cerebral oxygenation of the child during gestation and delivery (CARDOSO *et al.*, 2011). According to the 2010 Census booklet for People with Disabilities in 2012, there are 45,606,048 people in the country or 23.9% of the total population with some type of disability, of which 7% have motor deficiencies, which is in second place. In 2010, 2.33% of the population had some severe motor deficiency (OLIVEIRA, 2012). The motor deficiency is distributed as follows according to the age of 0 to 14 years. Only 1% of this population has a motor deficiency, in the age group of 15 to 64 years old 5.7% have a motor deficiency and in the age group of over 65 38%, 3% of the population has a motor impairment. Census data showed that disability affects people at any age, some people are born with it, others are acquired throughout life (OLIVEIRA, 2012). According to Hartwig *et al.*, 2015 p.3, "Some people with special needs are independent and capable of exercising their activities of daily living, while others need the presence of the caregiver so that

they can exercise them". Oral hygiene (BH) requires steps such as dental flossing, brushing with the brush in addition to precise, sometimes delicate, specific movements that require fine motor coordination, for an individual with a physical disability, especially in the upper limbs. challenge. If the patient in addition to physical disability still has an intellectual disability there is an increase in the severity of the picture with respect to HB (HARTWIG *et al*., 2015). When the special need patient (PNE), when unable to perform HB care, needs the help of a caregiver who becomes the main responsible for HB. However, many caregivers do not have the adequate and necessary knowledge and ability to perform an HB satisfactorily and are still unaware of the means and materials most suitable for the task, which leads to difficulties in achieving it. In this study, the use of HBPs in the management of NBPs was associated with difficulties in the management of NBPs, aggressiveness, and non-cooperation, and lack of interest, such difficulties lead to a lack of motivation for the implementation of HB (HARTWIG *et al*., 2015; NASILOSKI *et al*., 2015). The dentist can act by providing information, promoting education by demonstrating the correct way to promote HB, designing and prescribing auxiliary technologies, training family members and caregivers in a correct way, and encouraging them to promote HB in an uninterrupted and continuous manner. The motivation which is crucial to ensure the good oral health of the PNE, minimize the risk of oral pathologies. The objective of this study was to describe the dental approach for oral hygiene of individuals with motor deficiency.

MATERIALS AND METHODS

This is a literature review of the descriptive exploratory bibliographic character of a qualitative and quantitative approach based on exploratory reading. The articles search was carried out from articles indexed in the following databases: Virtual Health Library BVS and Portal of CAPES Newspapers in Portuguese, English and Spanish languages, published in the last 8 years from 2011 to 2018 and that contemplate the theme.

Development

Major dental pathologies in people with special needs: The PNE present high risk and higher prevalence of dental caries, dental trauma, presence of root remains, gingivitis, stomatitis, soft tissue lesions, mucocele, halitosis, dentin hypersensitivity, periodontal disease, more untreated teeth and greater loss of teeth prematurely, HARTWIG *et al*., 2015, SCHARDOSIM, COSTA, AZEVEDO, 2015, HADDAD, TAGLE, STEPS, 2016, BRAZIL, 2016). Patients who present with epilepsy may trigger gingival hyperplasia due to an imbalance in hygiene habits, fibroblast renewal and the use of drugs such as diphenylhydantoin, phenobarbital and valproic acid (DE ABREU, FRANCO, CALHEIROS, 2009). The high prevalence of oral problems may be related to precarious socioeconomic conditions, lack of knowledge, the limitations imposed by the disability such as lack of motor ability to maintain oral health, use of continuous medications that lead to reduction of salivary flow, high consumption low-cost and scarce localities that offer specialized treatment, few specialized professionals for this type of care, and greater difficulty for patients, family and caregivers to perform and maintain the required HB (Queiroz *et al*., 2014; HARTWIG *et al*., 2015, HADDAD, TAGLE, STEPS, 2016). According to Hartwig *et al*. (2015, p. 3), "the quality of oral hygiene is related to the patient's clinical condition, individuals with motor and intelligence problems usually have compromised oral hygiene." It is common for patients to have difficulty in performing mouthwashing, swallowing the dentifrice, especially those with cerebral palsy, to some of the postural characteristics, such as the recumbent and distended position of the head, open mouth, face muscles, lips and tongue, which, together with impairment of brain growth and development interfere with motor coordination and posture mechanisms (PINI, FRÖHLICH, RIGO, 2016). In the study by Pine, Fröhlich, and Rigo (2016) in an Association of Parents and Friends of the Exceptional (APAE) it was possible to observe high caries rates, class I malocclusion and inadequate oral hygiene in the children participating in the study, evidencing the need to invest in toothbrushes and trained professionals for oral hygiene orientation, especially after snacking, since the presence of caregivers to supervise and assist in brushing can reduce such indexes.

The oral hygiene of the patient with motor deficiency: One of the major challenges is to establish the appropriate and efficient home-based HB habit for patients with motor needs and achieve adherence. In order to provide guidance to family members and caregivers about the correct mouth hygiene as regards toothbrushing, mouth openers, fluoridated toothpaste and beaks, as well as feeding and medication care, the dentist's care should be guided by the patient's desensitization (regardless of their ability to collaborate) and the formation of the bond with the family with a careful anamnesis, where the patient will be evaluated for his / her general, behavioral and oral condition (SCHARDOSIM, COSTA, AZEVEDO, 2015).
The dentist must propose a personalized treatment plan for the control and mechanical and chemical removal of the bacterial plaque for PNE and directed to the family and carers aiming the promotion of oral health. It should stimulate and motivate the daily and effective removal of bacterial plaque by mechanical and chemical method, may minimize and prevent the development and progression of caries and periodontal disease (HARTWIG *et al*., 2015). For this Santos, Chad (2016) recommend the technique of brushing Fones for children up to 6 years of age and the Stillman brushing technique modified for children over 6 years of age and adults. The mouth openers indicated for use at home facilitate the performance of HB, provide safety and comfort, without risk of injury and bite, as they maintain the opening of the mouth facilitating the internal visualization of the oral cavity, avoiding accidents and allowing access with the brush to all the internal regions, including in the later region more difficult to access places. For this purpose, the hydraulic connections are more indicated, but if the family does not have the financial conditions can make their own mouth openers using several materials (HARTWIG *et al*., 2015, SCHARDOSIM, COSTA, AZEVEDO, 2015, NASILOSKI *et al*. 2015). There are commercially available mouth openers in various materials such as malleable rubber bite blocks for placement between metal arcades such as Molt metal mouth opener, acrylic thimble, moldable resin or PVC and those that can be manufactured manually from materials such as pet bottles, and PVC pipe gloves (BRAZIL, 2016). Home-made mouth openers have some advantages, such as the use of inexpensive, easy-to-find materials that can be more widely used and customized to become more practical (HARTWIG *et al*., 2015). A mouth opener can be created with overlapping tongue depressor, fastened with crepe tape and gauze wound at the

ends, which has as main advantage the softness in the area in contact with the patient where it can bite because of the gauze being more comfortable and reducing the risk of injuring the oral mucosa can be confectioned several and placed in weak ones with lid, however it is a disposable opener which can be expensive (HARTWIG *et al*., 2015).

Another very interesting mouth-opener is the one made from PET bottle that can be visualized in figure 2, low cost, easy to acquire, can be reused at each brushing since it can be sanitized or disinfected after use with products such as chlorhexidine 70 % and even hypochlorite. However, the pet bottle is a very rigid product, it can be uncomfortable, difficult anatomical adaptation, and there is the possibility of lesion of the gingiva in the part without cap because of the grooves, but the grooves facilitate the retention between the teeth (HARTWIG *et al*., 2015). It is still possible to use only the small bottle of the pet bottle cut and used as a thimble (BRAZIL, 2016). The PVC sleeve glove job as mouth opener, this plumbing part is also low cost, has various sizes and diameters facilitating finger adaptation can be sanitized or disinfected after use and has a good durability time. But it presents great rigidity leading to discomfort and leading to the risk of lesion of the oral mucosa and gingiva (HARTWIG *et al*., 2015). In the study by Cardoso, Cavalcante, Padilha (2011), oral health program was carried out for children with cerebral palsy with planned interventions aimed at caregivers referring mainly to oral hygiene as changes in care practices, in the form of oral hygiene that was qualified, being incorporating the use of fluoridated toothpastes, brushing techniques and a higher frequency of hygiene that led to a significant reduction of dental plaque index, biofilm, improvement of oral hygiene indexes, as well as positive changes in eating habits and oral hygiene through the aid of mouth openers during brushing (CARDOSO, 2012).

Also in another oral home health care program for children and adolescents with cerebral palsy and their caregivers, the caregiver received notions of health education and training for supervised brushing adapted with mouth openers and resulted in positive changes in oral indexes (CARDOSO *et al*., 2012).
The use of mouth openers should be taught through educational lectures and demonstrative training, disseminated and encouraged its use which may help the family and caregivers to decrease and overcome the difficulties to perform the patients' HB procedure (HARTWIG *et al*., 2015). However, there are recommendations regarding the use of good openers since they can trigger the stimulation of the reflex of regurgitation in patients with cerebral palsy, causing laceration of the lips and palate, dislocation of teeth and even extraction or fracture in agitated patients with sudden involuntary movements (BRAZIL, 2016). Therefore, mouth openers should be positioned preferably in regions of the occlusal faces of the posterior teeth, where they promote a better visualization of the oral cavity (BRASIL, 2016). Many families and caregivers report great difficulty in flossing, the use of dental floss makes it almost inaccessible. The dentist can recommend adopting the LOOP technique or teaching circle technique through demonstrative training as a further facilitator for people with special needs with less motor skill to use and thus complete HB. The technique consists of picking up a piece of yarn about 30 centimeters in length and lashing it in a circle shape as can be seen in figure 4 below. Position the fingers of both hands except the thumb to firmly hold the two ends inside the circle. The index fingers or thumbs are used to guide the wire through the teeth (HARTWIG *et al*., 2015). Or even use of manufactured dental flossers, available in various market forms, delicate anatomical models of various sizes are a solution for flossing all teeth even in the most posterior region of the oral cavity as can be seen in figure 5 below (HARTWIG *et al*., 2015). Hartwig *et al*., (2015) states that p.8: "There are no ideal and specific resources for the oral hygiene of patients with special needs, but there are alternatives that both the caregiver and the patient better adapt, respecting the particularities of each condition. Thus, it is important that the dentist is aware of these technologies and methodologies, as well as provide guidance to facilitate and ensure the maintenance of an adequate home oral hygiene promoting the health of the PNE".

The importance of guiding and training caregivers and family members: Moretto *et al*., (2014) argue that early management of patients is extremely important to determine the quality of HB child with disabilities, because the stimulus for carrying out the dental buco hygiene is very favorable at this age, for both the patient and the parents who will be responsible for this task. According to Nasiloski *et al*., (2015) to instruct the family, especially mothers, about adequate diet and oral hygiene, benefits of early dental treatment and periodic preventive returns should be the first measure to ensure the oral health of these patients. It is necessary for the family to understand the importance of oral health monitoring both in the dental office and the maintenance of the link between professional, patient and family as well as in the home. If oral health care is instituted early and supported by parents, the need for more complex dental treatments may be reduced (NASILOSKI *et al*., 2015). Schardosim, Costa, Azevedo (2015, p. 9) point out that ensure the family's membership in the process of prevention of oral diseases is one of the most difficult processes and labor in the daily routine of care for PNE since families for many sometimes they are unstructured or discouraged. It is enough to carry out the education and adequate training of the caregivers and family members and these after receiving guidelines report that they perform the HB and the brushing and even assist the PNE in HB (HARTWIG *et al*., 2015).

Conclusion

It can be concluded that the responsibility for cleaning of motor disabled patients is in most cases the responsibility of the family especially mothers and caregivers but is shared to some extent with the dentist that it must, therefore, direct their programs and educational interventions and training parents mothers and caregivers in order to properly orient the use of the brush, the number of brushings day, flossing of mouth openers to manufacture a mouth opener, his s doubts strips and above all build a relationship of trust, mutual knowledge, and support. Because many family members often do not perform oral hygiene adequately due to lack of motivation, support, guidance from a professional specialized in this area.

Conflict of Interests: There is no conflict of interest between authors.

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