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ORAL HEALTH OF CHILDREN WITH CEREBRAL PALSY: ASSESSMENT OF THE KNOWLEDGE OF THEIR PARENTS OR CAREGIVERS

Saúde bucal de crianças com paralisia cerebral: avaliação do conhecimento dos pais ou cuidadores

Salud bucal de niños con parálisis cerebral: valoración de los conocimientos de sus padres o cuidadores

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ABSTRACT

Objective: to identify the knowledge and behavior of parents/caregivers regarding the oral health of children with cerebral palsy and their respective care. **Method:** research with a quantitative approach, carried out with 14 parents/caregivers of the children with cerebral palsy, most of them mothers of female children. **Results:** as for the participants perception, 42.8% considered that their children's oral health was regular; in relation to oral hygiene, 57.1% performed toothbrushing three times a day and 100% did not use dental floss; 71.4% of the children had a dental appointment in the last six months, and only 50% of the participants were aware of what dental caries is. **Conclusion:** the oral health condition of children is precarious, due to lack of knowledge and guidance from caregivers. In addition, there is a lack of trained professionals to meet the demands of this population.

DESCRIPTORS: Nursing; Cerebral palsy; Oral health.

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RESUMO

Objetivo: identificar o conhecimento e a conduta dos pais/cuidadores referente à saúde bucal de crianças portadoras de paralisia cerebral e seu respectivo cuidado. **Método:** pesquisa de abordagem quantitativa, realizada com 14 pais/cuidadores de crianças portadoras de paralisia cerebral, a maioria mães de crianças do sexo feminino. **Resultados:** quanto à percepção dos participantes, 42,8% consideravam que a saúde bucal dos seus filhos era regular; em relação à higienização bucal, 57,1% realizavam a escovação dentária três vezes ao dia e 100% não utilizavam o fio dental; 71,4% das crianças realizaram consulta odontológica nos últimos seis meses, e apenas 50% dos participantes tinham conhecimento do que é a cárie dental. **Conclusão:** a condição da saúde bucal das crianças é precária, por falta de conhecimento e orientação dos cuidadores. Além disso, há carência de profissionais capacitados para atender às demandas desta população.

DESCRITORES: Enfermagem; Paralisia cerebral; Saúde bucal.

RESUMEN

Objetivo: identificar los conocimientos y comportamientos de los padres/cuidadores con respecto a la salud bucal de los niños con parálisis cerebral y sus respectivos cuidados. **Método:** investigación con enfoque cuantitativo, realizada con 14 padres/cuidadores, de niños con parálisis cerebral, la mayoría madres de niñas. **Resultados:** en cuanto a la percepción de los participantes, el 42,8% consideró que la salud bucal de sus hijos era regular; en relación a la higiene bucal, el 57,1% se cepillaba los dientes tres veces al día y el 100% no usaba hilo dental; El 71,4% de los niños tuvo una cita con el dentista en los últimos seis meses, y solo el 50% de los participantes conocían lo que es la caries dental. **Conclusión:** el estado de salud bucal de los niños es precario, debido a la falta de conocimiento y orientación de los cuidadores. Además carece de profesionales capacitados para atender las demandas de esta población.

DESCRIPTORES: Enfermería; Parálisis cerebral; Salud bucal.

INTRODUCTION

Cerebral Palsy (CP) is described as a group of permanent disorders of movement and posture development attributed to a non-progressive disorder that occurs during fetal or infant brain development and may contribute to limitation in the person's functionality profile. The motor disorder in CP may be accompanied by sensory, perceptual, cognitive, communication, and behavioral disturbances, epilepsy, and secondary musculoskeletal problems. CP affects about two children per 1,000 live births worldwide, and is the most common cause of severe physical disability in childhood.[1] Children with CP can be classified according to the most dominant clinical feature, that is, by the type of dysfunction present. The resulting clinical picture includes extrapyramidal or dyskinetic, mixed, and spastic types. The classification can also be made by the topography of the damage, that is, according to the location of the affected body, which includes tetraplegia or quadriplegia, monoplegia, paraplegia or diplegia, and hemiplegia.[1]

An epidemiological survey carried out in 14 European countries showed a higher number of cases of CP in boys and a rate of 85.7% of the spastic form, present in one of every five affected children.[2] Some studies state that the main cause of CP may be associated with perinatal problems, especially asphyxia of the neonate.[3-4] However, currently, although without a consensual definition, the etiology has been related to pre-existing prenatal brain abnormality, i.e., directly to prenatal factors such as congenital infections and lack of oxygenation.

Other relevant perinatal factors are neonatal anoxia and eclampsia, while postnatal factors include infections and trauma.[1] The clinical signs of CP involve alterations in tone and the presence of atypical movements, as well as topographical distribution of the impairment.[1] CP in childhood interferes with the child's long-term global growth and development, requires extensive assistance and follow-up by a multiprofessional team, and causes repercussions in the growth and development process, affecting the daily life of all family members.[5]

Another aggravating factor in children with CP are dental lesions, considering that the oral health of these children presents a diversity of problems, which are associated with aspects such as cariogenic diet,[6] lack of hygiene habits, motor coordination difficulties, decreased salivary flow due to the use of medication, and difficulty in accessing dental services. Thus, these children are usually affected by high rates of periodontal infections and gingival hyperplasia, aggravated by the continuous use of medication.[7]

Oral health is included in general health and, when affected, will impair the quality of life of children with CP. Thus, parents or guardians of these children play a fundamental role in the prevention of oral diseases, and it is essential to guide them on how to perform adequate oral hygiene. Through these situations, one can reflect on how relevant is the role of the family in the care of this child to meet their needs. The caregiver, usually the mother, feels vulnerable to the demands of caring for the child with special needs and, therefore, needs emotional support to strengthen the relational and affective bonds and to live harmoniously with the child.[8]

It is noted that parents go through a long process of adaptation and reorganization in their "new world," which requires the development of strategies capable of meeting the demands of caring for the child with special needs resulting from cerebral palsy.[9] Given the above, and recognizing the broad, complex, and multifaceted reality of the problem, this research is justified by the need to understand some elements that touch on health care and are present in the family context of children with CP in relation to oral health. The objective was to identify the knowledge and conduct of parents/caregivers regarding the oral health of children with cerebral palsy and their respective care.

METHOD

This is a research with a quantitative approach. Quantitative research highlights the observation and appreciation of phenomena; establishes ideas; demonstrates the degree of substantiation; reviews ideas resulting from the analysis; proposes new observation and appreciation to clarify, modify and/or substantiate responses and ideals.[10]

The research was carried out at the Nursing School Unit of the Midwestern State University (UNICENTRO), located in the municipality of Guarapuava, in the state of Paraná-PR, in conjunction with the Orthotics and Prosthesis Project, which is a Permanent Extension Project, coordinated by the Nursing Department (DENF) of UNICENTRO. This project provides evaluation, fitting, training, monitoring, and provision of orthoses and prostheses to individuals with physical or motor disabilities, including children with CP.

The research participants were 14 parents/caregivers of children with CP enrolled in the Unicentro Orthosis and Prosthesis Program. Inclusion criteria were: parents or caregivers responsible for children with CP, over 18 years old, whose children were between 0 and 12 years old, enrolled in the Orthotics and Prosthesis Program, and who were being assisted by the service during the data collection period. Parents/caregivers of children diagnosed with other associated pathologies and those responsible for institutionalized children were excluded from the study.

The data were collected through semi-structured interviews guided by an instrument developed by the researcher. The interviews took place in February and March 2020, in the Nursing School Unit, based on the schedules of the Orthotics and Prosthesis Project. The data were organized in a table, with the help of the EXCEL tool, and analyzed by descriptive statistics. All participants responsible for the children were informed about the study by reading and signing two copies of the Informed Consent Form. The research was submitted and approved by the Research Ethics Committee (COMEP) of the Universidade Estadual do Centro Oeste (UNICENTRO), as determined by Resolution 466/2012 of the National Health Council, under opinion number 3.231.813, CAAE: 08018919.1.0000.0106, on March 29, 2019.

RESULTS

Fourteen interviews were conducted with the parents/caregivers of children with CP. Most of the children were female (57.1%) and were between six and ten years old (57.1%); the remaining (42.9%) were between one and five years old. As for the caregivers' profile, mothers (92.8%), in stable union (57.1%) predominated. As for the level of education, 78.5% had completed high school. Only 35.7% had paid work outside the home, and more than 57.1% of the children were inserted in families that earned up to 2 minimum wages per month. As for the region of origin, 42.9% of children were from the city of Guarapuava-PR and 57.1% from neighboring cities in the region. Regarding the data collected on the perception and care performed with children's oral health, the results are presented in Chart 1 below:

Chart 1– Presentation of the results regarding the perception and care performed with the oral health of children with cerebral palsy. Guarapuava-PR, 2019-2020

<table>
<tr><th>ISSUE</th><th colspan="4">ANSWER</th></tr>
<tr><td>1- What is your opinion about your child's oral health?</td><td>Excelent
14,2%</td><td>Good
35,7%</td><td>Regular
42,8%</td><td>Ruim
7,1%</td></tr>
<tr><td>2- How many times a day do you brush your child's teeth?</td><td>3x a day
57,1%</td><td>2x a day
42,8%</td><td>1x a day
-</td><td>Do not brush
-</td></tr>
<tr><td>3- Do you floss your child's mouth?</td><td>Yes
-</td><td>No
100%</td><td>Sometimes
-</td><td></td></tr>
<tr><td>4- How does your child cooperate when performing oral hygiene?</td><td colspan="2">Collaborate
78,5%</td><td colspan="2">Not cooperating
21,4%</td></tr>
<tr><td>5- When was the last time your child had a dental appointment?</td><td colspan="2">In the last 6 months
71,4%</td><td colspan="2">Never
18,5%</td></tr>
<tr><td>6- Do you know what caries is and how it is caused?</td><td colspan="2">Yes
50%</td><td colspan="2">No
50%</td></tr>
</table>

DISCUSSION

Studies on the oral health of children with CP show a prevalence of the disease in males (56.1% and 60.5%) and in the age group from one to twelve years of age (51.2% and 48.8%, respectively).[2,11-13] These data differ from those found in the present study, in which a prevalence of CP was identified in female children.

However, the results found corroborate these studies by showing a predominance of mothers who are the primary caregivers of children with CP and need to significantly change their routines and give up other social roles to meet the demands of their children.[2,11-12] As they present limitations in the performance of daily activities, the child with CP needs special care not only related to the disease, but also for the prevention of associated factors, such as self-care, hygiene, and social interaction.

In this study, the caregivers had an average level of education and low economic level, and most families lived on up to two minimum wages. In a study that investigated the oral health conditions of children with CP, the predominant level of education of caregivers was incomplete elementary school (45.7%) and family income ranged from 1 to 2 minimum wages (66.0%). Factors such as socioeconomic level and level of education may contribute to difficulties such as poverty and lack of information on oral health care, which can hinder the access and continuity of dental treatment in this population.[2,11-13]

We identified, through the first question of the semi-structured interview, the perception of participants/caregivers about the oral health of children, and most of them considered it regular. This result may be related to a greater need for care in the oral hygiene of these children. Other studies show that children with CP need more care regarding oral health, because of the high rates of caries, which reflects the need for quality dental treatment and access to dental appointments.[2,11-12] The result found in this study also points to the need to guide parents about the proper oral hygiene of their children, as well as to ensure regular visits to the dentist.

Despite the need for dental care appropriate to the conditions of these patients,[14] we observed less access to dental services by children and adolescents with severe physical or mental impairment, in addition to problems related to the use of these services.[13]

Regarding the frequency of oral hygiene by the caregiver, subject of the second question of the interview, the participants referred to perform tooth brushing three times a day, a frequency considered adequate after the three main meals. Some mothers/caregivers reported difficulties in brushing their teeth (twice a day), due to lack of cooperation from the child and lack of ability and knowledge to perform this procedure. In a study to investigate the oral health conditions by assessing the rates of caries, periodontal disease, malocclusion, and dental fluorosis, and to determine possible factors associated with the development of these oral diseases in children with CP, oral hygiene was performed twice a day (46.3%). As in the aforementioned study, in the present research this procedure was performed by mothers or other responsible people (85.4%).[11]

In the third question, the interviewees reported not using dental floss as an item in the oral hygiene of their children. This result may be related to the caregivers' lack of knowledge about the importance of this material for oral hygiene and caries prevention. In the study cited above, the data were similar, as dental floss was not used either.[11] However, the importance of educational aspects in oral health of children with CP should be emphasized, even before the eruption of deciduous teeth. Training programs for caregivers on how to perform oral hygiene, the importance and the use of dental floss are fundamental.

Despite the comorbidity, in the fourth question, the data show that children are mostly collaborative regarding the moment of oral hygiene. Studies show that mothers/caregivers report dependence on their children for daily oral health care, as well as a greater need for oral hygiene in children and adolescents with more severe motor impairment. Other similar studies report that individuals with special needs have high dependence on a caregiver to perform activities of daily living, including oral hygiene.[14-15]

The results showed, in the fifth question, that ten of the children had a dental consultation in the last six months. In a study to evaluate the occurrence of dental caries and the treatment needs of patients with CP, as well as to know the main difficulties of access of these patients to dental treatment, we observed a low percentage of patients seeking dental care before the age of four (12.6%).[2] According to some authors, this fact can be attributed to the lack of knowledge of the caregivers about the need and importance of oral health maintenance in these children. It is known that for children in general, and especially for patients with CP, the deciduous dentition phase (from six months to five years of age) is a very important period from the dental point of view, in which preventive actions should be instituted early, aiming to prevent damage to the permanent dentition, as well as to general health.

In the sixth question, half of the participants demonstrated previous knowledge on what dental caries is, which may be associated with several factors, including social, cultural, and economic ones.

Currently, the prevalence of caries in the population of children with CP compared to the population of children in general is much debated. For some authors, the condition of CP, by itself, does not predispose patients to caries or periodontal disease; however, socioeconomic and cultural factors interfere in the occurrence of these diseases, such as lack of guidance on the ingestion of cariogenic foods and inadequate oral hygiene.[2]

Studies show that the presence of diseases associated with CP often requires the use of continuous medications for long periods of time. These drugs may have several side effects on the oral health of children with CP, including reduced salivary flow, increased risk of caries, and the presence of gingival hyperplasia.[16]

The multifactorial cause of dental caries is well established, and results from the interaction of biological, economic, cultural, environmental, and social factors.[17] Performing effective oral hygiene is the main method for prevention. The disease originates in the disorganization of the dental biofilm, which, when colonized by caries-causing bacteria, acidifies the environment by decomposing the substrate, leading to enamel demineralization and consequent progression of the process to the dentin and pulp.[18]

Patients with CP who take oral medications have higher rates of caries, although their caregivers are instructed on how to perform oral hygiene after medication administration.

An epidemiologic survey of preschoolers in Hong Kong compared the oral health of children with and without CP and found similar caries experiences in both groups. Other studies have also identified similar or lower caries experiences in children with CP compared to those without CP. In Brazil, studies point out higher caries experiences in the deciduous dentition of children with CP.[2]

CONCLUDING REMARKS

It was identified during the study that the oral health conditions of children with CP are precarious due to the less favored socioeconomic conditions, the lack of knowledge and guidance of caregivers on how to perform adequate oral hygiene, and the lack of trained professionals to meet the demands of this population. Contributing to this situation are the lack of accessibility to dental services and the responsibility of the caregiver who assumes the role of care as a whole, significantly changing her life to improve the children's conditions.

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