AMALIY VA TIBBIYOT FANLARI
ILMIY JURNALI
ISSN: 2181-3469
Jild: 03 Nashr:06 2024 yil

SCIENCE BOX

THERAPEUTIC AND PREVENTIVE ASPECTS OF DENTAL PROBLEMS OF CHILDREN WITH CEREBRAL PALSY

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Relevance of the study. According to the classification of Semenov K.S. (1973), Ford (1952), Futera D.S. (1955) and Zucker M.B. (1962), five forms of cerebral palsy are distinguished: double hemiplegia; spastic diplegia (Little's disease); hyperkinetic form; hemiparetic or hemiplegic form; atonic-astatic form. Bilateral hemiplegia is the most severe form of this disease and occurs in 12-15% of the total number of patients with cerebral palsy. Bilateral hemiplegia is characterized by the absence or even almost complete absence of the controlling influence of the cortex on subcortical root mechanisms. The activity of the latter is usually pathological in nature and determines the main clinical symptoms of double hemiplegia: muscle rigidity, absence or sharp restriction of voluntary motor skills, which does not repeat in the first weeks of life and turns into pathological tonic reflexes - labyrinthine, cervical symmetrical, asymmetric tonic and many other reflexes. Patients with cerebral palsy in the form of double hemiplegia usually do not have basic skills not only walking, but also self-care. Symptoms of pseudobulbar palsy are almost always present, which makes it difficult to chew and swallow food. In 50-70% of cases, diencephalic, gravitational, and hyperkinetic syndromes are detected. Mental development is minimal, there are pronounced speech disorders. Speech disorders in the form of dysarthria were observed in 80% of patients with spastic diplegia, mental disorders occurred in about 50% of patients. Spastic diplegia may be accompanied by diencephalic traction or hyperkinetic syndromes. At the same time, athetoid or choleretoid hyperkinesis was more pronounced in the fingers and facial muscles. An urgent task is to organize the joint work of specialists of different profiles in order to increase the level of multidisciplinary therapeutic, preventive and rehabilitative care for this category of patients. The complexity of carrying out therapeutic, preventive and rehabilitative measures in children with cerebral palsy is associated with the presence of various syndromes of central nervous system damage. Early dysontogenetic damage to the motor analyzer at an early age is accompanied by generalized spasticity. Children with cerebral palsy have impaired motor function formation, coordination of subtle, differentiated movements, so it is difficult for such children to take care of the oral cavity [1.3.5.7.9]. A correlation was revealed between the pathology of the dental system and the delay in the neuropsychiatric development of the child.

The following increased indicators of the dental status of children with CNS diseases were revealed: the prevalence of caries 98.0%, and periodontal diseases 80.0%, in addition, the remineralizing function of saliva was reduced in 84.0% of cases. The saliva of the examined patients showed an increase in the quantitative content of gram-positive cocci - Streptococcus mutans in 85.0% and a representative of the normal oral microflora Lactobacillus spp in 92.0% of children. A high percentage of extracted teeth was observed among children aged 15-18 years with cerebral palsy living in Serbia (10.6%), and HPA in 70.6%. A number of other studies have noted the presence of increased tactile sensitivity of the oral cavity, salivation, changes in the tongue: increase in size, swelling, smoothness or hypertrophy of the filamentous papillae of the dorsum and tip. Saliva is one of the important biological components of the oral cavity that ensure oral health. In children with cerebral palsy, saliva secretion can be either reduced or increased, while saliva has a high viscosity. Soft plaque is constantly

formed on the teeth, which in turn leads to the development of the carious process and periodontal diseases. The state of oral health is also influenced by the acid-base balance of saliva (pH) and other components of saliva (phosphorus, magnesium, etc.). In addition to somatic pathology, properties of oral fluid, homeostasis of the oral cavity, poor hygiene, the following factors can be identified in the development of diseases of the oral cavity: irrational diet; frequent use of caries products by children; irregular use of fluoride-containing pastes (or non-use of toothpastes at all, which is typical for children, especially with a disease of the nervous system). Cerebral palsy at the age of 12 offered the following preventive measures: training in brushing teeth, flossing, chewing sugar-free chewing gum, applications with fluoride-containing gels "Fluocal", "Fluorolac". As a result, it was possible to achieve an improvement in the hygienic condition of the oral cavity, the condition of the marginal periodontium.

The research conducted in this direction has developed a scheme for the comprehensive treatment of chronic catarrhal gingivitis in this category of sick children: oral hygiene training, controlled tooth brushing, professional removal of dental deposits, the use of Metrogil Denta and Solcoseril drugs, gymnastics for the muscles surrounding the dentition, and respiratory gymnastics. Treatment of destructive forms of caries in children with cerebral palsy. This method included the use of a phytopreparation containing the following components (in % ratio): 40% alcohol solution of calendula 43.50; 40% alcohol solution of celandine 15.75; 40% alcohol solution of yarrow 15.73; ecdysterone 0.02; glycerin 25.00. Another Russian specialist and researcher proposed a method for the treatment of generalized chronic catarrhal gingivitis, which consisted of a combination of BRS + DVUS + Calcemin. The proposed and performed treatment corrected the value of the studied oral fluid parameters. Oral hygiene in children with cerebral palsy was used in group 1 of the studied children with a conventional brush, in group 2 an electric brush, and in group 3 an electric brush, a spray of chlorhexidine and calcium gluconate, in group 4 a spray of chlorhexidine and calcium gluconate. The best indicators of hygiene indices were noted in the group where an electric brush, a spray of chlorhexidine and calcium gluconate were used, it was proved that the effectiveness of this combined application was significantly greater than in other groups. Electromyographic examination of the muscular complex of the dental apparatus is of great importance in functional dentistry and is characterized by high diagnostic efficiency. Electromyography (EMG) is a method for determining the functional state of muscles, which consists in registering bioelectric potentials that arise in muscles at the moment of arousal. It is used as a method of scientific and diagnostic significance, since it can be used to determine the contractility of the masticatory muscles and the nature of excitatory - inhibitory processes in the muscles [2.4.6.8.10]. The method of electromyographic examination of the chewing and facial muscles allows us to reveal the subtle processes of restructuring the dental system in various pathologies, including in children and adults.

Electromyographic examination of the chewing and mimic muscles at rest revealed an increase in their bioelectric activity and its uneven changes. In these patients, the bioelectric activity of the chewing muscles decreases during motor manifestations (dentition during chewing and clenching), as well as the coordination of their functions is disrupted. When swallowing, bioelectric activity of the chewing and mimic muscles occurs, which has a compensatory character and is associated with a significant decrease in their functions. It is necessary to study the functional state of the masticatory and facial muscles in patients with anomalies of the dentition system using various equipment and technical methods [11.13.14]. Untimely treatment of such pathologies can lead to the formation of a pathological motor stereotype, growth disorders and contractures.

Conclusion. Thus, children suffering from cerebral palsy have been diagnosed with chronic gingivitis among periodontal diseases, extensive carious lesions, enamel hypoplasia and pathological tooth erasure, bruxism among diseases of the hard tissues of the teeth, delayed teething, malocclusion, teeth

and dentition among diseases of the hard tissues of the teeth. Children with cerebral palsy need specialized medical care, including dental care, since the quality of life of children is deteriorating, at the same time, the hygienic condition of the oral cavity is deteriorating. The study of the functional state of the masticatory and facial muscles using various instrumental and technical methods is necessary in patients with anomalies of the maxillary system. Since untimely treatment of such pathologies can lead to the formation of a pathological motor stereotype, vicious poses and contractures, especially in cerebral palsy.

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