IJIMM, Volume 2, Issue 6, 2024 ISSN: 2995-5319
http://medicaljournals.eu/index.php/IJIMM/issue/view/3

INTERNATIONAL JOURNAL OF INTEGRATIVE AND MODERN MEDICINE

Features of the Prevalence of Dental Diseases and Dental Anomalies in Children with Cerebral Palsy

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Relevance of the study. Studies of the dental status of children suffering from cerebral palsy indicate a high prevalence of dental and facial anomalies (88-93%), the causes of which are dysfunction of facial and chewing muscles, language manifested by their stereotypical habitual reactions. As you know, 70% of children with cerebral palsy have oral breathing. In such children, oral respiration exacerbates the violation of the activity of the facial muscles, the circular muscles of the mouth, and the tongue, which is accelerated by the development of dental anomalies (ZFA) with the appearance of a more pronounced clinical picture of these anomalies. Disorders of the myodynamic balance between the buccal, masticatory, temporal and sublingual muscles are characteristic. The myodynamic balance may be disturbed between the circular muscle of the mouth, chin and the muscles of the floor of the oral cavity. In case of impaired respiratory function, the activity of the circular muscle of the mouth increases several times compared to the norm, and its endurance decreases significantly. With speech disorders and speech disorders, children with spastic forms of cerebral palsy have a syndrome of mutual aggravation. As a result of complex clinical, instrumental and functional studies of dental and neurological statuses, data on the frequency, structure of speech disorders and speech disorders in children with various clinical variants of spastic forms of cerebral palsy were obtained. These data should be used in practical healthcare for planning treatment and preventive work in rehabilitation centers. Studies have shown that children with movement disorders are characterized by athetosis, which is characterized by slow, worm-like, pretentious movements. In this regard, children with this pathology cannot independently carry out manipulative actions [1.3.5.7]. Also, in children with cerebral palsy, the muscles that perform chewing and speech functions are always affected, so some patients have difficulty talking. There are problems with controlling salivation, so food particles get stuck between the teeth, which often causes caries and other diseases of the oral cavity. The condition of the oral cavity in children is often unsatisfactory. To study the hygienic status of the oral cavity in children with cerebral palsy, V.R. Ogonyan (2003) used the Fedorov-Volodkina technique, the Schiller-Pisarev test and the dental index of the RMA. The study revealed: a high prevalence of systemic enamel hypoplasia (19.04%), dental caries (93-100%). In her work, she also noted the high prevalence of HFA, speech disorders (95.4%), respiratory dysfunction (95.4%), inflammatory lip diseases (80.5%). In patients with spastic diplegia, characteristic disorders of swallowing function and delayed teething are described. Many authors pointed to the high prevalence of HFA among children with PVR lesions, as well as caries (92.3%) and poor oral hygiene [2.4.6.8.10]. Unsatisfactory hygienic conditions were noted, as a result of which A high prevalence of caries was observed in this cohort of patients. A high prevalence of HFA was found.

Caries was common in 84.0% of children with cerebral palsy. In addition, early manifestations and high intensity of caries, a large percentage of caries complications were noted. Examining the content of sugar in blood and saliva, calcium, inorganic phosphorus, as well as the content of total protein in saliva, the author did not find clear deviations in blood and saliva parameters in children with dental caries and in children of the control group. In children with cerebral palsy with multiple caries, there was a tendency for disorders in the systems regulating carbohydrate metabolism. The author notes that under the influence of the causes leading to the development of cerebral palsy, patients with cerebral palsy experience a weakening of the structure of the hard tissues of the teeth, which occurred in the prenatal period (baby teeth) or during the formation of permanent teeth after the birth of a child plays an important role in the development of caries. This assumption is confirmed by a large percentage (18.77%) of tooth enamel hypoplasia in these patients. It is characteristic that the prevalence of

hypoplasia of baby teeth is 2 times higher than hypoplasia of the enamel of permanent teeth [9.11.13.14]. Occlusal anomalies are the most common among HFA (58.67%): deep incisor overlap (frontal teeth) (deep bite) - in 51% of cases, vertical incisor dislocation (frontal teeth) (open bite) - 19.33%. This work differs significantly from the previous ones, since the author, in addition to a detailed clinical examination of patients, used special methods of studying PHS - dental and electromyography, anthropometry of jaw models, as well as temporal, chewing and circular muscles of the mouth. The prevalence of caries was 81.5%, almost half of the patients (43.6%) had multiple caries. Much attention was paid to the study of bad habits in patients with cerebral palsy, which the author found in 71.3%. Measurements of teeth, dentitions and their apical bases were performed on 402 models of teeth of 201 children. 142 models of 284 children were selected for special analysis. An EMG study of individual muscles of the PHC was used in 75 children with various forms of cerebral palsy, distal occlusion (prognathic occlusion), functional disorders of the PHC muscles.

In children and adolescents with cerebral palsy aged 7-18, the prevalence of periodontal diseases is 94.4%, in most cases they occur in the form of chronic catarrhal gingivitis. In many patients, the state of oral hygiene was assessed as unsatisfactory (according to the Fedorov-Volodkina method). HFA was detected in 85% of patients, and there was a tendency to increase the prevalence of HFA with increasing age. It was also noted that the prevalence of dental caries increases with age and reaches 11-14 years. The work is based only on clinical examination data and contains only general information about the prevalence of HFA in children with cerebral palsy [12.13.14].

Cerebral palsy with a hyperkinetic form, which is determined by the following factors: the first manifestations of hyperkinesis occur in the muscles that raise and lower the lower jaw, the nerve fibers of which are myelinated mainly in the chewing group and the muscles of the tongue. As a result, the parafunction of these muscles contributes to tooth abrasion; In 100% of patients in this category, factors complicating the biological history and contributing to the deterioration of the developing tooth tissues were affected. According to the author, dental caries is a pathognomonic symptom for other forms of hyperkinetic and hyperkinetic components of cerebral palsy.

Conclusion. In children with cerebral palsy, a high prevalence of vertical (vertical) dysocclusion of incisors (front teeth) was revealed (open bite), which the author considers one of the pathognomonic symptoms of this disease, including macroglossia and hypotension of the tongue muscles located between the teeth, hypotension of the muscles supporting the lower jaw (as a result, the child's mouth is always open) and against the background of chewing reflex, swallowing and speech articulation are associated with this pathology. Cerebral palsy and found a high prevalence of caries - 94.8%, as well as periodontal diseases - 71.8%. Damage to the hard tissues of the teeth of non-carious origin, that is, enamel hypoplasia, was detected in 32% of the examined, pathological erosion of hard tissues - in 26.9%. Thus, the literature data showed a significant prevalence of caries and its complications in children with cerebral palsy, an increase in non-carious lesions of teeth and HFA was noted.

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