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Clinic, Diagnosis and Treatment of Diseases of the Temporomandibular Joint in Patients with Neuropsychiatric Pathologies

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Relevance. We know that health assessments of a certain contingent use a number of indicators of indicators: according to the results of sociological assessments, medical and demographic assessments, morbidity, disability, physical health. At the same time, the following are distinguished for a comprehensive assessment of the functional state; group I – healthy; group II – healthy individuals who do not have any chronic disease, but have various functional abnormalities, decreased immunological resistance, frequent acute diseases, etc.; Group III – patients with long–term current diseases with mostly preserved functional capabilities of the body; group IV – patients with long-term current diseases with reduced functional capabilities of the body; group V - severe patients in need of bed rest [10, 24]. Also, the dependence of the occurrence of a pathological situation in the oral cavity (PR) on the general state of the body is beyond doubt [2]. Thus, the incidence of caries has been proven in a number of somatic diseases, including when harmful factors affect the human body [8, 14, 19]. Pathological changes in the organs of PR and secretion of the salivary glands in neuropsychiatric diseases were noted [10, 15, 22], the relationship of the occurrence of wedge-shaped dental defects with diseases of the central nervous system was also noted. In the formation of the pathological process, a number of authors see a possible pathogenetic role of dysfunction of the autonomic nervous system and central nervous system [10] the authors claim that many mental diseases occur against the background of somatic diseases, metabolic disorders, dysfunction of the endocrine and autonomic nervous system, organic lesions of the central nervous system (CNS), changes in the blood system, etc. However, the influence of neuropsychic factors on the maxillary system has not yet been sufficiently investigated.

The state of the dental system (ZCHS) and the provision of comprehensive dental care to mentally ill is a little-studied issue. Dental care is practically provided only for the treatment of acute pain or complications, in addition, due to the specifics of mental illness, rehabilitation (PR) is not carried out.

The experience of dentists and their assistants in providing dental care to patients with mental disorders has shown that to work with this category of patients, special training is needed to communicate with mental patients, problems arise associated with unpredictable behavior of patients and communication difficulties [13]. It is also known that various groups of psychotropic drugs are used in the treatment of mental illnesses: neuroleptics, antidepressants, tranquilizers, normotimics, nootropics and correctors. They have a different effect on the state of the ESR, causing hyper- or hyposalivation, reducing pain sensitivity, which in turn contributes to the transition of the acute form of dental diseases into chronic.

A number of authors note [17] a number of the most important risk factors for the occurrence of PNZ, namely: pregnancy complicated by gestosis, molecular genetic "breakdowns", unbalanced nutrition (absence of the most important components involved in the growth and development of the

central and peripheral nervous systems), neuroinfections, psychological and traumatic brain injuries in the postnatal period, chronic somatic pathology, the consequence of which may be a violation of the formation and maturation of the nervous system. The author believes that children with intellectual deficiency, in the vast majority of cases, were accompanied by perinatal pathology; -83% of children with low intelligence; and children with normal intelligence had - in 56% of cases.

A number of authors believe that oxidative stress (OS) is the most important mechanism of neuron damage in the formation of pathology of the nervous system and nerve tissue is most sensitive to changes in redox potential and damage by free radicals. In this regard, OS is considered the root cause or the leading component of the pathology of the central nervous system, including neurodegenerative conditions. The discovery of the phenomenon of excitotoxicity and OS allowed us to establish that excessive production of neurotransmitters is a key link in the pathogenesis of most types of central nervous system pathology, leading to damage to the nerve cell membrane [15].

Morphofunctional changes in children with PNZ undoubtedly lead to hormonal and metabolic disorders, which contributes to a change in the general and specific reactivity of the macroorganism and is associated with a violation of protective and compensatory mechanisms with the formation of persistent multiple organ pathology. With perinatal brain damage due to severe hypoxia/ischemia, irreversible damage to the nervous system is detected, which are manifested by hydrocephalus, microcephaly, cerebral palsy (cerebral palsy), convulsive syndrome and delayed psychomotor development [16].

In children who have undergone perinatal hypoxia, even mild forms of damage to the nervous system with an erased clinical picture at an early age and minimal neurological disorders can contribute to the development of chronic maladaptation syndrome, which causes the occurrence and severe course of pathology of the cardiovascular and respiratory systems and various disorders of the gastrointestinal tract (gastrointestinal tract) and the functions of other organs [20]. It is known that various PNZ, including systemic ones, can occur simultaneously and comorbidally, having a common etiology and pathogenesis. However, in order to form a system of accounting for morbidity and causes of mortality, as well as to ensure the reliability and health statistics in ICD-10 [24], neuropsychiatric pathology is differentiated into classes V and VI, namely mental disorders and behavioral disorders (F00-F99) and diseases of the nervous system (G00-G99). Despite the pathogenetic differences of PNZ, which determine their relationship to different ICD codes, they have a number of common clinical signs characterized by the absence or delay in the development of key neurological functions: speech, perceptual, motor, communicative, intellectual, both in isolation and in combinations.

According to the author, the PNZ in children tends to increase: for the southern Federal District, since over the period 2016-2017, the incidence of children with mental disorders and behavioral disorders in children for this region increased by 7.8%, and the incidence of diseases of the nervous system by 2.1% and amounted to 7574.6 people and 21226 people, respectively. At the same time, systemic and local disorders occur, and dental pathology enhances the functional disorders of the antioxidant system (AOS), as a result of which the "vicious circle" closes [4].

Dental pathology in children with PNZ, modern ideas about the causes of its occurrence in recent years, many domestic and foreign studies have been published concerning dental problems in children with PNZ. Dental morbidity is especially noted in this contingent; that is, with PNZ is characterized by high prevalence and intensity, as well as the simultaneous development of various diseases: dental caries, periodontal pathology, occlusion disorders, etc. Also, many authors pay attention to the clinical features of dental problems in the discussed contingent: intensity, severity of pathology and tolerance to traditional therapy [10]. However, there is no consensus on the qualitative and quantitative characteristics of dental pathology in such children, and most of the published studies are aimed at studying the dental picture in children with any one type of PNZ. Also, often, only a certain direction of dental pathology is investigated: therapeutic - caries, periodontal diseases or hygiene problems; - surgical or orthodontic.

For example, according to the author [6], dental care for children with neuropsychiatric pathology is poorly optimized, untimely and is insufficient, which may be one of the reasons for the high level of intensity and prevalence of diseases of the hard tissues of the teeth. A high level of dental morbidity in children with PNZ is also associated with difficulties in perceiving information, a violation of the communicative sphere, and as a result, non-compliance with the most important hygienic standards of care for PR. In addition, PNZ lead to the formation of bad habits, which in psychoneurology are considered as neurotic habitual actions and belong to the group of anxiety disorders.

Also, a frequent side effect of psychotropic therapy is the formation of sensory disorders, which levels the number of complaints and pain syndromes in such children and indirectly increases the intensity and prevalence of dental pathology [3].

The role of local factors, in particular ionic and enzymatic balance, SEX processes, activity of antiradical protection enzymes in the saliva of children with PNZ, has been poorly studied. The informative, non-invasive, and economic attractiveness of oral fluid (RV) studies contributes to the priority of this direction in individual and screening homeostasis examinations of this contingent. The pathogenetic mechanisms of dental pathology in children with PNZ may be in the sphere of changes in the physico-chemical properties of the oral fluid: a decrease in the volume of saliva production, acidic pH, violation of the microbiota of PR [9].

In his work, he establishes that dental anomalies are very common in both temporary and permanent teeth, and in patients with Down syndrome, dental anomalies occur with a frequency five times higher than this indicator in a healthy population. In temporary occlusion, the most common primary adentia is represented by lateral incisors, while in permanent occlusion, the third molars, second premolars and lateral incisors are most often affected by primary adentia in the specified sequence, the most common anomalies associated with autism, mental retardation and Down syndrome are variations in the number of teeth and morphology: lateral incisors of conical shape, incisors of "shovel-shaped" shape and taurodontism. It is also known that the only liquid structure in which all the tissues and organs of PR are immersed is RYE, which is considered an essential component of the digestive process, since it serves for the initial breakdown of lipids and starches, thanks to endogenous enzymes. However, in recent years, the understanding of the meaning of RS and PR in general has significantly expanded. Numerous studies have shown that saliva actually contains various molecular and microbial analytes, which is the main entrance for gastrointestinal microorganisms. Each department of the gastrointestinal tract has a specific microbe regulated by physiological and other environmental factors. Also, oral fluid may contain molecular information capable of transmitting the current state of human health. A biomarker is an objectively measured and evaluated indicator of normal biological processes, pathogenic processes or pharmacological reactions to therapeutic intervention [12, 23]. Also, a number of studies have shown that markers of oxidative stress are reliably detected in patients with periodontitis. This confirms that the study of markers of oxidative stress in the RV is justified. The most studied marker of lipid peroxidation is malonic dialdehyde (MDA), which is obtained from fatty acids with two or more intermittent methylene double bonds [21]. Protein products with a high level of oxidation are a sensitive biomarker of protein oxidation, especially due to the activation of neutrophils and the enzymatic activity of myeloperoxidase. Also, it was found that salivary myeloperoxidase is higher in patients with periodontitis. The most common parameters of oxidative damage in periodontal diseases are markers of lipid peroxidation (POL): higher lipid peroxidation in saliva was found in patients with chronic periodontitis, a positive correlation of POL in the RV and gingival fluid was revealed, a link between periodontal diseases and TBK-reactive products of saliva was revealed MDA is the most studied product of lipid peroxidation. In a cross-sectional study, enhanced oxidative damage to DNA, lipids and proteins was observed in patients with periodontitis.

According to the author, the leading "scenarios" of neuron damage are: increased energy deficit in conditions of brain tissue acidosis, ion imbalance, excess of neurotoxic amino acids and accumulation of free radicals that trigger oxidative stress (OS). The activation of POL and the decrease in the level of its own antioxidants are commented by many authors as the leading mechanisms of nerve cell damage. Accumulation of H2O2 in tissues leads to inactivation of

superoxide dismutase (SOD). A large number of researchers consider the degree of activity of endocellular antioxidant systems to be genetically determined, and an excess of O2-anion radical or H2O2 is a consequence of the depression of the genome regions responsible for the function of endogenous antioxidant systems. Aizatulina D.V. (2009) believes that in the pathogenesis of cerebral palsy (cerebral palsy) and other PNZ, the leading etiological factor is oxidative stress (OS), as the most likely mechanism of genome disruption. At the head of this process in PNZ is intensive mutagenesis due to an increase in the production of free radicals (endomutagens) and a decrease in the activity of antimutagenic protection. The presence of oxidative stress contributes to an increase in the severity of neuropsychiatric disorders [1].

It is reported that the prevalence of malocclusion is higher among children with physical and/or mental disabilities compared to healthy children [5] has established a link between the most severe dental anomalies and cerebral palsy. Although studies have studied the prevalence of malocclusion among children with PNZ, the association of occlusion anomalies and the high prevalence of caries in children with PNZ has not been confirmed to date.

According to the author, hallucinatory-delusional syndromes with aggressive and autoaggressive behavior that contribute to the formation of therapeutically resistant hallucinatory-delusional states, such patients at late ages, features of premorbid personality, unfavorable social and marital status, frequent stressful effects, prolonged traumatic situations, intercurrent somatic and neurological diseases, comorbid mental disorders, organic stigmatization, decreased physiological tolerance, non-compliance with the therapy regimen and iatrogenism. Treatment of such pathologies usually requires prolonged and persistent therapy, with careful selection of a suitable drug, its dose and duration of therapy. Psychotherapy and rehabilitation measures are mandatory. Before the appearance of atypical antipsychotics, therapeutic preference in these cases was given to neuroleptics with the so-called disinhibiting effect, which were prescribed in low doses - triftazine 5-10 mg / day, frenolone 10-15 mg / day, sulpiride 200 mg / day. Recently, atypical neuroleptics have been used for the treatment of such conditions, but even their use has only partially been able to solve the problems of therapy of asthenoanergic disorders in the paranoid form of schizophrenia. Psychopath-like states in schizophrenia, accompanied by socially dangerous tendencies, represent not only a medical, but also a social problem[14.15.17.19.21.23.25.27.29.31].

Currently, there is a tendency in domestic psychiatry to provide psychiatric care in out-of-hospital conditions, which corresponds to the world practice of treating mentally ill people. However, this problem has become particularly relevant in recent years. Psychosocial therapy and psychosocial rehabilitation is recognized as one of the most important areas of modern psychiatry and is a mandatory component of the comprehensive treatment of mental disorders. The nature of psychiatric care primarily depends on the characteristics of the mental pathology observed in patients. Various authors attributed the presence of mental automatism, verbal and olfactory hallucinations, the systematization of delirium to factors negatively affecting the social functioning of patients, attaching importance to its features such as content, orientation, degree of generalization. Also, when providing outpatient care, it is necessary to take into account that the social functioning of patients is significantly influenced by the peculiarities of their social environment and relationships with it. As a result of a number of studies, it was found that 50% - 80% of chronically mentally ill people live in families so, according to A. B. Shmukler, only 1/4 of patients with severe, persistent and often aggravated mental disorders are married, and more than 40% of patients have never been married or married, more than 2/3 of the dispensary contingent patients live in families, as a rule, in parents or families of adult children. At the same time, although in most cases patients occupy a dependent position in the family, and relations with relatives are often quite complicated, the family provides maximum support to patients, often masking their insolvency to a large extent [18.20.22.24.26.28.30.32]. The presence of a family causes additional requirements for the functioning of patients. Thus, there is a more significant violation of family functioning in women with schizophrenia compared to men. On the other hand, the family can become a kind of refuge for women, in particular in case of job loss: they leave work more easily than men and do household chores.

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