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METHODS OF PREVENTION AND TREATMENT OF CARIES AND NON-CARIOUS DISEASES IN HYPERPARATHYROIDISM

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Annotation. Changes in the functions of the endocrine glands lead to disruptions of metabolic processes in the body, a number of trophic disorders. Changes in the oral cavity are detected in disorders of the functions of the reproductive, thyroid and parathyroid glands, hypothalamic-pituitary system.The earliest symptoms of primary hyperparathyroidism are minor and are associated with changes in the condition of many organs, so it is very difficult to determine the time of onset of the disease. Numerous symptoms of this disease depend on hypercalcemia, increased urinary excretion of calcium and phosphorus, and are associated with changes in the skeleton and metastatic calcifications in soft tissues.

Keywords: parathyroid gland;osteoporosis; phosphorus-calcium metabolism; enamel ultrastructure; mineralization; caries resistance

Introduction. The multifactorial nature of existing causes plays a role in the development of dental pathology, including disruption of the endocrine system, in particular the parathyroid gland, it is necessary to periodically conduct a blood test to determine the blood composition for the level of calcium, vitamin D3, parathyroid hormone. In addition, to ensure the prevention and prevention of complications that have developed dental pathology, the body should be provided with the necessary amount of calcium and vitamin D, recommending drugs containing these substances.

The tissues of the oral cavity can also be sensitive to a deficiency of certain food components. When there is a deficiency of proteins during the period of tooth development, it leads to a decrease in their size and weight, and the structure of tooth enamel is disrupted. The amount of protein in the diet is directly related to the mineral components of teeth and jaws. With a reduced protein content in the food consumed, the accumulation of calcium and the formation of apatite occur irrationally.

The aim of the study was to assess the state of oral hygiene and introduce methods for the prevention and treatment of caries and non-carious diseases in hyperparathyroidism.

Materials and methods of research: Patients who were admitted with carious and non-carious dental injuries, regardless of the presence or absence of hyperparathyroidism, were recommended to use toothpastes containing fluoride and calcium, dental floss with fluorides with almost no restrictions, since any somatic pathology, age, even changes in climatic conditions can cause leaching of calcium and fluoride with the body, and the development of similar pathologies. And it should be noted that even fluorosis was not always a contraindication to the use of these toothpastes. This principle was also followed to prevent the development of carious and non-carious dental diseases in the patients we studied.

Results of the study: After using a composite material, oral sanitation, treatment of the underlying disease and the use of the drug "Denta-Fluo" in combination, objective symptoms in the form of discoloration of the oral mucosa, lining and swelling of the tongue significantly improved within 3 weeks ($P<0.001$).

However, despite the improvement of symptoms such as papillary atrophy of the tongue and the presence of imprints in its lateral surface, they did not have statistically reliable results,

apparently requiring longer treatment of the underlying pathology and the supervision of specialists.

After obtaining positive results when using Denta-Fluo for 10-15 days, and further strengthening the structural changes in the hard tissues of teeth with S-LIGHT composite material, the dental status of patients was monitored over the next 3 months. In the meantime, antiresorptive drugs were recommended with dynamic monitoring of the index score of the result. Thus, using the Rusel method of calculating the periodontal index (PI) according to the 8-point system, significantly positive results were observed in comparison with the signs before treatment ($P<0.01$), in the form of recovery. According to X-ray analysis and resorption of the clinical pocket, the closing cortical plates at the tips of the alveolar process, the PI after treatment was 1.62±0.2 points for primary and 2.34±0.3 for secondary hyperparathyroidism.

The dynamics of the treatment program continued to be observed using the Muhlemann method – there was a decrease in bleeding, absence of blood in the interdental triangle and perfusion bleeding after probing, while the Muhlemann index was on average 1.62 ±0.2 degrees in patients with primary hyperparathyroidism and 1.53±0.1 degrees with the secondary form of the disease, with spot bruising and single mild linear bleeding according to the edge of the papilla

The assessment of the state of oral hygiene, according to the Green-Vermillion index, in the dynamics of treatment was carried out after mechanical cleaning of the dental surface, then the treatment program proposed by us was added, against which a decrease in the degree of the OHI-S index to 0.86 ±0.2 was noted, having no statistical difference between the groups, while in relation to They were statistically different from the signs detected before treatment ($P<0.01$).

The assessment of the state of oral hygiene, according to the Green-Vermillion index, in the dynamics of treatment was carried out after mechanical cleaning of the dental surface, then the treatment program proposed by us was added, against which a decrease in the degree of the OHI-S index to 0.86 ±0.2 was noted, having no statistical difference between the groups, while in relation to They were statistically different from the signs detected before treatment ($P<0.01$). The Green Vermillion Index (OHI-S) was rated as "low", and oral hygiene as "good", i.e. The proposed treatment program proved to be effective and acceptable for widespread use in dental practice.

Since, in the physiological state, the gums are no more than 2-3 mm from the tooth, with pathology (for example, an inflammatory process when the gum begins to swell and turn red), the gap becomes larger and a periodontal or gingival pocket forms, with the formation of caries of the root of the tooth, a violation of periodontal connections, which leads to loosening and development of periodontitis. Thus, after applying the proposed treatment program, there was a decrease in the depth of the periodontal pocket, which depended, as mentioned above, on the condition of the periodontal, i.e. reduction of inflammation symptoms – in group 1, there was a complete absence of a periodontal pocket after treatment ($P<0.001$), in group 2, in patients with primary hyperparathyroidism, it was 1.32±0.23 mm, significantly different from patients before therapy ($P<0.01$); in the secondary form of the disease, the depth of the periodontal pocket was It is equal on average to 1.86±0.15 mm ($P<0.01$). As can be seen, in the comparative group, when there is no picture of hyperparathyroidism, the proposed treatment program is significantly more effective, however, in the presence of hyperparathyroidism, there is a more persistent nature of periodontal inflammation and residual phenomena of the periodontal pocket, with partial resorption. Despite long-term treatment with antiresorptive drugs, in patients with secondary hyperparathyroidism, the depth of the periodontal pocket was significantly greater than in patients with primary hyperparathyroidism ($P<0.05$), although they had statistically significant results in the dynamics of therapy ($P<0.01$, $P<0.001$, respectively).

According to the Masser method, the PMA index, which indicated an inflammatory process in the gums, was reduced, and its degree in group 2 was reached to 12.6±0.94% in primary hyperparathyroidism, and 13.8±1.1% in the secondary form of the disease, which corresponded to a mild degree of inflammation in the comparative group of patients without a hyperparathyroid clinic, There was a complete disappearance of inflammation after treatment, which was statistically significant compared to the initial signs in both groups 1 and 2 (P<0.001)

Conclusions

Thus, the process of caries and non-carious dental processes are serious pathologies that can become an important indicator and/or predictor of the development of somatic diseases, indicating the physical health of people suffering from hyperparathyroidism. However, prevention of such conditions, timely diagnosis, and the right choice of therapy are among the important priorities of medical and dental ethics to prevent the development of serious complications and diseases associated with deformity of the maxillary system. In this regard, despite the numerous scientific works of domestic and foreign researchers, this problem remains relevant and timely, and for some reasons little studied and in demand for the development of methods of early diagnosis, prognosis, prevention, and treatment.

Early diagnosis of these diseases in the oral cavity will make it possible to comprehensively plan the prevention and treatment of developing pathologies in the oral cavity.

Thus, the analysis of therapy using the program consisting of Denta-Fluo preparations and S-LIGHT composite material in patients with structural changes in teeth suffering from hyperparathyroidism shows significantly high effectiveness, however, based on the genesis of the disease, which requires connection to the treatment of the underlying disease in the early stages of pathology, it may It can serve as a prevention of the development of caries and non-carious dental diseases, as well as the prevention of complications, even such as tooth loss.

Following all that has been said, we can add that in order to preserve the dental health of the population, oral hygiene and proper nutrition should be necessary first of all. The genesis of dental diseases, and even more so those associated with severe irreversible somatic pathologies, partly having a genetic origin, needs to be carefully studied and managed jointly with related specialists in order to obtain the most effective treatment results.

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