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STUDY OF CHANGES IN THE ORAL CAVITY IN ENDOCRINE DISEASES

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ABOUT ARTICLE

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Abstract: One of the problems of modern clinical dentistry is the growth of inflammatory diseases of the oral cavity, which occur against the background of secondary immunodeficiency [3, 6, 8]. The internal factor affecting the immune response is the endocrine system, which is part of the complex of neuroclin regulation of homeostasis. An important role in the pathogenesis of various dental diseases is assigned to a complex multifunctional relationship between the immune, nervous and endocrine systems.

INTRODUCTION

The endocrinological aspect of dental diseases is reflected in several basic scientific studies [4, 5, 9], which show a close relationship between the diseases of the oral organ system and the pathology of the endocrine system. 1. One of the most common diseases of the endocrine system is hypothyroidism. Number of authors 26. They indicate a high prevalence of chronic systemic periodontitis with hypothyroidism [2,4,9].

Studies by many authors have revealed a high incidence of caries and a high intensity of caries in children living in iodine-deficient zones.

However, these data are few and scattered. A comprehensive and detailed study of the effects of hypothyroidism on the development of oral diseases has not been conducted. An important pathogenic link in periodontal disease is a failure of the "semi-antioxidant" system. It is known that hyperactivity

of the thyroid gland increases the intensity of peroxidation process lipids (sex) and increases the effect on the functional state of periodontal tissues [1,7,10,11]. There are practically no studies devoted to the study of the process of development of oral diseases with hypofunction of the thyroid gland. 1. One of the possible triggers for the formation of disorders in the oral cavity is the activation of the immune system [2.11].

The involvement of cytokines in the development of periodontal disease is believed to be proven. There are isolated studies showing an increase in cytokine content in patients with thyrotoxicosis, but there is no evidence of a decrease in cytokines in the development of oral diseases against the background of thyroid dysfunction.

No.. In this regard, the study of the processes of sex and cytokine content in serum during the development of oral diseases against the background of hypothyroidism is an urgent task of dentistry, the solution of which allows not only to expand the understanding of some mechanisms of the formation of lesions of the oral cavity in thyroid dysfunction, but also to develop new effective diagnostic methods.

METHODS

The clinical and laboratory part of the study is based on the results of the examination of 96 patients with chronic systemic periodontitis. Of these, 22 patients with mild chronic systemic periodontitis, 42 with moderate chronic systemic periodontitis and severe chronic systemic periodontitis and 32 with combined hypothyroidism. Indicators such as the paradental index, the nipple-limbic-alveolar index and the Ketze index to objectify clinical evaluation. To reliably determine the intensity of the inflammatory process, the Schiller-Pisarev test was used. Radiological studies have also been conducted to measure the depth of periodontal pockets. The study of indicators of sex and antioxidant protection was carried out according to the following method: Blood was taken from an empty vein in a test tube with EDTA at a final concentration of 1 mg/ml. The concentration of malondialdehyde in plasma was studied (L.I. Andrieva 1988). M.A.The rate of catalase reaction in serum and erythrocytes according to the method proposed by Kovrov. Enzyme immunoassay using a human kit was used to quantify tumor necrosis factor α (TNF−α), interleukin−1 (IL−1β) and interleukin−4 (IL−4). Results of the study. As a result of the examination of patients with hypothyroidism, it became clear that the frequency of systemic periodontitis is high. The chronic course of the disease was mainly observed. 60.1% of respondents said they were "elderly."

25-45 years old, they noted mainly moderate and severe periodontitis. In patients with hypothyroidism.

Diffuse congestive hyperemia of the gums predominated. There is a significant deposition of tartar, the presence of periodontal pockets with serous purulent discharge up to 5 mm deep. The main clinical signs of severe periodontitis in patients with hypothyroidism were hyperemia with pronounced swelling, multiple periodontal pockets with a depth of more than 5-6 mm, frequent relapses of inflammation associated with exacerbation of the underlying disease. A feature of the course of generalized periodontitis in patients with hypothyroidism was the presence of non-carious lesions of dental tissues. In 12% of patients with generalized periodontitis with hypofunction

The thyroid gland was diagnosed with erosion of the hard tissue of the teeth, a wedge-shaped defect in 14%, and pathological tooth wear in 10.2%. In these patients relatively often generalized periodontitis was combined with candidiasis oral mucosa (28.2%). The course of non-carious dental lesions and the nature of the outcome were largely determined by the course of the underlying disease. With severe systemic periodontitis and severe hypothyroidism, particularly unfavorable dynamics of non-carious tooth lesions were observed.

RESULT

The results carried out suggest that the condition of the patient's periodontal tissue is determined primarily by the duration and severity of hypothyroidism. As can be seen from the results of the tests shown in Table 1, the content and antioxidant system of POL products were studied in 96 CGP patients with hypothyroidism. 18 people were CGP patients without thyroid pathology (control group). CGP patients were also distributed according to the severity of oral disease. It was revealed that the level of malondialdehyde in serum was significantly increased in HCG patients in combination with hypothyroidism. The studied indicators in the group with CKD and CKD on the background of hypothyroidism, they practically did not differ from each other and from the control group. Data on the antioxidant activity of serum in patients with hypothyroidism did not differ significantly in the groups of mild and moderate CGP patients, but in severe cgp patients, a significant (P<00.5) decrease in total blood antioxidant activity when compared to the control group. Specific kinetics were observed in the activity of serum catalase in the tested patients. Thus, in severe CGP with associated hypothyroidism, serum catalase activity is significantly increased ($P < 0.05$). As a result, different kinetics were observed in erythrocytes. When compared to the control group, catalase activity decreased by 15% at an average CGP degree, and severe CGP decreased by 20% (P<00.5). Thus, people with thyroid dysfunction revealed a significant increase in LPO products in serum, along with a decrease in its antioxidant activity, especially severe CGP. When enzyme immunoassays were conducted in patients with CGP of varying severity against the background of hypothyroidism, the highest content of studied cytokines in

the serum of a statistically significant schiff of cytokine status was recorded in patients with moderate to severe CGP). Thus, in patients with a combination of moderate CGP and hypothyroidism, the level of IL1β in serum increased by 1.6-fold (P <00.5), and 1.9-fold (P <00.5) in severe CGP, compared to 27 in the control group. The serum IL-4 content of CGP patients with hypothyroidism also increased, with an average degree of 1.5 times and a severe degree of 1.7 times (P<0.05) compared to the control group. Similarly, a pattern of change was also observed when studying the levels of TNF-α in the serum of the patients studied. The content of this cytokine in individuals with HCG combined with hypothyroidism was 1.5 times higher and 2 times higher than the control value in individuals with hcg (P<00.5). So, in patients with CGP of various severity in combination with hypothyroidism, activation of the immune system is noted, which, most likely, leads to the development of the underlying disease.

CONCLUSION

Inflammatory diseases of periodontal tissues in patients with hypothyroidism are mainly chronic and generalized in nature, characterized by high activity of inflammatory destruction processes in the region of the alveolar bone junction. In patients with severe CGP against the background of hypothyroidism, significant activation of sexual processes and a decrease in antioxidant protection were observed. With thyroid dysfunction, it has been shown that there is a pronounced activation of the immune system, which is manifested by an increase in the level of cytokines in the serum. The highest concentrations of TNFa, IL-1 and IL-4 were detected in patients with moderate CGP with hypofunction of the thyroid gland.

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