

Pathogenic Course and Treatment of Periodontal Tissue Diseases in Obese Patients

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ABSTRACT

The relevance of the topic: with the development of civilization, the spread of periodontal tissue diseases has increased significantly. Chronic periodontal tissue diseases: ischemic heart diseases, atherosclerosis, bacterial endocarditis, glomerulonephritis, septic pneumonia, diabetes, collagenosis, gastrointestinal diseases, etc. are the initial and supporting mechanism. their general medical and social significance. Abolmasov N.G, Abolmasov N.N., Geletin P.N. 2009y. Borisova E.N. 19987y. Garaja N.N., Garus Ya.N., Ivashov A.V., Sakurov A.A. 2007y.).

Often, periodontal diseases are asymptomatic, therefore, for their early diagnosis and prevention, a comprehensive examination of the oral cavity in patients and requires the properties of the protective factors of the oral cavity. Bekjanova O.E. 2008y. Grilevskaya K.I., Maiboroda Yu.N., Karakov K.G. 2007y.)

Periodontitis is associated with an infectious inflammatory disease, and it is a disease of a non-infectious nature of periodontitis. The relapse rate and activity of chronic periodontitis depends on the patient's health. (Bezrukova I.V., Grudyaynov A.I. 2002y. Grilevskaya K.I., Mayboroda Yu.N., Karakov K.G. 2007y.)

Despite the large number of annual studies devoted to the problem of periodontitis in our country and abroad, many aspects of pathogenesis, clinical variants of complications, timely diagnosis and effective prevention are unclear, contradictory and poorly understood. One of the poorly studied aspects of the problem is clinical disease, diagnosis and prevention of general periodontitis in patients with background diseases, especially in their combination. At the same time, in the last decade, there is a tendency to significantly increase the general forms of somatic pathology in patients with periodontitis. Alimentary constitutive obesity microorganisms, Due to inflammation and dystrophic diseases of periodontal tissues, the immunological reaction of periodontal tissues and the fact that it is an undoubted risk factor for the development of the whole organism, the combination of both pathologies certainly increases this risk. Grechishnikov V.V. 2005y. Loginova N.K., Krechina E.K. 1998).

There is an inverse relationship between vascular diseases and the degree of deterioration of the lipid structure of cell membranes. An imbalance between cell and plasma lipoproteins in the process of metabolism or lipid transport is one of the main reasons for the appearance of defects

in membrane structures, and blood cells have poor adhesive aggregation properties and functional properties [44,54 ,61,62,63].

The metabolism of the lipid components of the cell membrane plays an important role in the development of pathological processes in periodontitis, because it affects many directions of pathogenesis - calcium exchange, cyclic nucleotides, produces interleukins, which are important in the implementation of microcirculation homeostasis disorders [63]. At the same time, periodontitis disease, despite many studies, the data in patients with general periodontitis with obesity lacks a serious theoretical basis. Current ideas about the polyetiological features of periodontitis disease lead to various tools and treatment methods, but none of them provide long-term therapeutic effect or cure. .

Due to the rapid development of clinical immunochemistry and immunology in recent years, the attention of researchers is directed to the immunological and biochemical aspects of periodontitis, especially somatic diseases . (Alekseeva O. 2002y. Balakhanov L.V., Aydagulova S.V., Nepomnyashchikh L.M. 2005y.)

As mentioned above, to justify the use of pharmacological agents for the prevention and treatment of these serious diseases, the importance of the problem, the study of the role of lipid disorders and generalized periodic shows the importance of variable metabolic processes in pathogenesis.

The purpose of the study: to assess the prevalence and clinical characteristics of chronic generalized periodontitis among obese patients, as well as their interrelated key aspects to improve treatment methods and prevention.

Job duties:

1. Analysis of the course of chronic generalized periodontitis in obese patients (retrospective analysis)
2. Determination of the specificity of changes in markers of fat metabolism;
3. Assessment of periodontal microcirculation in study patients.

1.1. Modern rates of general etiopathogenesis of periodontitis

Today, periodontal diseases are one of the most common and complex pathologies in modern dentistry (Bezrukov V.M., Grigoryants L.A., Rabukhina N.A, Badalyan V.A. 2003)

In different regions of the world, about 50 percent of the population between the ages of 17 and 60 have various forms of periodontal disease. (Grigoryan A.S. etc. 1999). In developed countries, about 90 percent of the population have symptoms of gingivitis, 50 percent have moderate periodontitis, and 3 percent have severe periodontitis. (Hetz G. 2001).

According to the information of the World Health Organization (2005), the functional disorders caused by the death of the dental system in periodontitis diseases increase 5 times compared to the complications of caries and take the second place in the period of spread among all dental diseases (Vishnyak G.N. 1999. V.V. 2005y . Zazulevskaya L.Ya. 2006y.)

The author obtained information about the spread of local periodontological inflammation and infectious pathologies based on the analysis of accounting and accounting documents of dental institutions, the study of the structure of etiological factors, and the frequency of influence on the development of local peripheral diseases. Research has determined that the main causes of local periodontal development are the structure and nature of the inflammatory and destructive process, including pathogenetic factors and infectious-toxic factors, depending on the quality of dental care provided to the population, when the dental pulp is inflamed. (Grechishnikov V.V. 2005y.) Literature analysis shows that current scientific research does not fully reveal and justify

the confusion and criteria that determine the relevance of the problem for the diagnosis of periodontal diseases (Puzin M.N., Kiparisova E.S., Wagner V.D. 2007y.)

Information on this problem published in the scientific literature in recent years shows the concept of chronic inflammatory diseases of the gastrointestinal system, which lead to damage to the organs and tissues of the oral cavity and periodontitis. According to the author, the conditions for the appearance of inflammation in periodontitis are created in diseases of the digestive system, because there is a violation of a number of regulatory mechanisms: immune and endocrine imbalance, endokytosis, microcirculation, neurohumoral regulation, psychosomatic dependence, changes in the metabolism of connective tissues, mineral metabolism, vitamin deficiency. Microorganisms growing in subgingival plaques include more than 30 pathogenic microorganisms. Among them are *Porphyromonas gingivalis*, *Prevotella intermedia*, *Actinobacillus actinomycetemcomitans*, *Bacteroides forsythus*, *Treponema denticola* (Bitsermeister S. D. 2003. Kankanyan A. P., Leontev V. K. 1998y . Müller H. P. 2008y). The authors proved the etiological role of these microorganisms in the occurrence of periodontitis, their connection with the severity of lesions determined the quantitative levels of various anaerobic microflora (Bitsermeister S. D. 2003 y. Nikolaeva E. N., Tsarev V. I. 2004 Gonzalez JR, Michel J., Diète A. 2002y.v.b)

The most important etiological factor in gingivitis and periodontitis, most authors consider dental microflora. Conditionally pathogenic microorganisms are recognized as one of the underlying factors in the etiology of inflammatory periodical diseases. (Tsepov L.M., Goleva N.A. 2009y.v.b). there are streptococci, hemolytic staphylococci, trichomonads, fusobacteria, actinomycetes and others. In addition, specific gram-negative bacteria are detected in periodontal pockets, including: *Porphyromonas gingivalis*, *Prevotella intermedia*, *Actinobacillus actinomycetemcomitans*, *Campylobacter*, *Bacteroides forsythus*, *Treponema denticola*, *Veillonella*. (Tsepov L.M., Goleva N. .A.2009). 85 percent of all microbes are anaerobes, and 10 to 15 of them have pathogenic properties. These microbes, which form a group of periodontopathogenic genes, damage the gingival epithelium moving along the edge of the tooth with highly viscous, invasive and toxic properties. (Grigoryan A.S., Grudyanov A.I.2001y.). The important factors of these microorganisms are endotoxins, the chemical composition of which is lipopolysaccharide that interacts with immunoglobulins A, G and M and various components of complement. (Ivanov VS, 1998y.). Exo and endo endotoxins disrupts cellular metabolism, causes changes in periodontal tissues, which contributes to the development of an inflammatory reaction. The development of the inflammatory process in periodontitis, its spread and chronic effects are determined not only by the types and amount of oral microorganisms, but also by the body's protective status and the responses of the immune system.

The body's immune reactivity plays an important, if not an important, role in the development of inflammatory periodontitis diseases. (Grudyanov A.I., Dmitrieva N.A., Fomenko E.V. 2002)

The value of the immune system (innate and acquired immunity) is related to tissue expression of tissue cytokines, chemical activation and recruitment of anti-inflammatory cells, local and systemic metabolism, hemodynamic immunological and neuroregulatory abnormalities and changes in microbiocenosis. (Yonemura T. 1989y. Watanabe K. etc. 1991. Firatii E. etc. 1996. Siqueira JF etc. 2001y).

Inflammation and inflammation in the periodontal period play an important role in the triggering mechanisms of destructive processes, and there are local and general systems of homeostasis protection and maintenance. Changes in nonspecific reactivity in periodontitis have been identified by many researchers. Depending on the severity of the pathological process in patients, complement titer and serum pepsin amount the level of serum lysozyme and the phagocytic activity of blood leukocytes decrease.

Thus, there is a change in the immunoglobulin indices A and sgA at the moderate level of periodontitis. (Hagewald S, Bernimoum JP, Kottgen E, Rage A. 2000).

1.2 Characteristics of periodontitis in metabolic disorders.

The spread of periodontitis in the population, difficulties in the prevention and treatment of the disease, and the uncertainty of the main pathogenetic mechanisms (anti-inflammatory, immune and metabolic) are of great importance in medicine.

Inflammatory diseases of the periodontal complex are very common in patients suffering from metabolic diseases (metabolic syndrome, diabetes, gout, erythematous). The periodontium is sensitive to the pathogenic effect of the factors that make up the spectrum of metabolic diseases. These two things reflect the inflammatory and metabolic effects of the main pathogenetic mechanisms (Butrova S .A. 2001. Bitsermeister S. D. 2003y).

Periodontal pathology mainly develops from inflammation in nature and changes in the body's reactivity, local causes in the organization of the effect of immunity, as well as general and local factors. Ensuring the genetic stability of the internal environment of the body, for reasonable reasons, forms a chronic inflammatory process of the immune system designed to protect against various exogenous and endogenous pathogens and metabolic diseases. Such changes form the basis of the mechanism of the development of many pathological processes, such as girentonich, ischemic heart disease, obesity, gout, etc. The pathological process includes diseases of the organs and tissues of the oral cavity, especially periodontitis. directly depends on the severity of the disease and the factors caused by the therapy carried out. Metabolic syndrome shows that insulin, proinsulin, growth factors are described as having the same immunity. The composition of immunoreactive insulin is insulin proinsulin, growth factors, S-peptide, free insulin and protein-bound others consist of several forms. The ratio of these forms can be different, which is very important because they have different biological and proliferative activity. The predominance of one form or another of insulin and proinsulin determines the course of the pathological process, including periodontitis.

CONCLUSION.

1. periodontitis spread on the background of obesity is characterized by the intensity of the clinical symptoms of periodontal pathology. Due to the rheological property of lipid metabolism and the dysfunction of hemocytase, there is a violation of microcirculation in periodontal diseases, which leads to inflammation and destructive changes. % ($P < 0.05$).
2. In patients with obesity in the periodontal pocket, the number of leukocytes increases by 19-20, monocytes by 5-7. Yeast fungi were found (mycelium in 70%, spores in 15.6%). Oral epithelium showed signs of degeneration and injury in 32.8%, signs of destruction (cell nuclei) and layers of epithelial cells, as well as connective fibers.
3. Strong synthesis of IL-8 (8 times, equal to 26.4 ± 2.13 mg/ml, $P < 0.05$), lactoferrin, alpha-2 macroglobulin (2.5 times - 4.4 ± 0.51 mg/ml, $P < 0.05$), a decrease in the level of plasminogen (2 times - 6.0 ± 0.56 mg/ml, $P < 0.05$), which is related to tissue hypoxia and destruction processes in periodical tissues brings
4. Against the background of obesity, SUP is distinguished by the balance of blood lipids and hormonal mixed saliva, which is accompanied by a significant increase in hormone levels by 18 times (68.2 ± 7.11 mg/ml) ($P < 0.05$); (20.3 ± 1.96 mg/ml, $P < 0.05$), progesterone- 1.3-fold (0.07 ± 0.001 , $P < 0.05$) and a 2-fold decrease in the level of free testosterone in eggs combined amount 1, 8 times (9.36 ± 0.83 , $P < 0.05$). These changes lead to the destruction and destruction of periodontal tissues and inflammation.

5. In patients with obesity, the amount of cholesterol in the blood plasma of SUP increased by 1.7 times (7.89 ± 0.53 mmol/l, $P < 0.05$), triglycerides by 3.5 times (2.89 ± 0.9 mmol/l, $P < 0.05$), as well as a significant decrease of phospholipids by 1.9 times (1.44 ± 0.07 mmol/l, $P < 0.05$), desquamation of endothelial cells by 2 times ($4.68 \pm 0.31 \cdot 10^4 / l$, $P < 0.05$); 2.3-fold increase in the amount of active platelets ($28.4 \pm 1.61\%$, $P < 0.05$); These changes have a negative effect on the entire periodontal microcirculation.

Practical recommendations

1. In order to improve the rehabilitation of patients with chronic generalized periodontitis and obesity, a comprehensive approach to the treatment of these patients and improvement of the monitoring of the main diseases is carried out together with relevant specialists.
2. Regular dispensary is recommended for patients with obesity.

Follow-up by a periodontist: patients with chronic generalized periodontitis, on average, 1 time in 3 months; patients with chronic generalized periodontitis, patients with a mild degree or with gingivitis - 1 time in 6 months, adjusting the frequency of visits depending on the frequency.

It is recommended to use LDF for diagnostic assessment of microcirculation disorders and treatment of inflammatory periodontitis.

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