METHODS FOR STUDYING PERIODONTAL DISEASES IN WOMEN IN THE POSTMENOPAUSE PERIOD

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Annotation. Much attention is paid to the relationship between the menopause and the pathology of other organs and systems. A study of the dental status of menopausal women has proven the existence of a relationship between a decrease in estrogen concentrations and a sharp increase in dental diseases. Since the oral mucosa contains estrogen receptors, hormonal changes can be manifested by the progression of dental diseases such as caries, gingivitis, periodontitis, as well as changes in the oral mucosa: burning, bad taste in the mouth, saliva viscosity, dry mouth.

Key words: menopause, estrogen, caries, gingivitis, periodontitis, dental diseases.

The problem of menopausal disorders in women is relevant in all countries of the world. The menopause is a physiological process in the life of every woman, manifested by general involutional processes in the body, against the background of estrogen deficiency. The average age of menopause around the world ranges from 49 to 51 years, with a trend towards expanding the age range of the physiological period.

According to a number of authors, women in menopause have a high likelihood of developing burning mouth syndrome, manifested by intense pain and spontaneous burning in the tongue, gums, lips, inner cheeks, palate, or spreading throughout the entire oral cavity.

Menopausal women are susceptible to a deficiency in estrogen concentrations, which leads to decreased saliva secretion. As a result, the risk of developing dental and periodontal diseases, as well as dysbiosis of the oral microflora, increases.

There is a pathogenetic relationship between decreased reproductive function and the development of TMJ pain dysfunction syndrome. So G. Guan describes the presence of estrogen receptors in the articular cartilage of various joints.

Numerous studies have found that a decrease in estrogen concentration leads to osteoporosis in the skeletal bones, characterized by a decrease in bone mass and a

decrease in its density, which can also be a risk factor for the progression of periodontal diseases.

According to research results, the most common dental disease among menopausal women is periodontitis, which, according to a number of studies, is found in 80% of women. Periodontal disease, the cause of most cases of tooth loss, is a source of chronic infection with a negative impact on the health of the body and quality of life in general. According to most researchers, the primary role in the development of periodontal pathology is given to the microbial factor.

The complex of periodontopathogenic bacteria that are detected during periodontitis includes microorganisms such as: Porphyromonas gingivalis , Tannerella forsythia , Treponema denticola , Prevotella intermedia and Aggregatibacter actinomycetemcomitans . Qualitative analysis of these pathogens is especially important both for making a diagnosis and for assessing the risk of developing the disease. The most specific and highly sensitive method indicated for this study is PCR (polymerase chain reaction).

Despite the large range of means used to improve the condition of oral tissues, treatment is not always successful. This is due to the fact that the treatment does not take into account hormonal disorders, which also affect the progression of dental diseases.

According to some authors, the use of hormone replacement therapy by patients during perimenopause , the purpose of which is to reduce bone loss, prevent osteoporosis and improve dental status, is an effective method of treating menopausal symptoms in the oral cavity. However, a number of researchers refute the positive effect of HRT on periodontal tissue and question the validity of hormone replacement therapy, both for preventive and therapeutic purposes.

An urgent task of modern dentistry is the early identification, prevention and elimination of factors that contribute to the imbalance of physiological processes in periodontal tissues in menopausal women. In this regard, the purpose of our scientific research is justified.

Estrogen deficiency plays a pathogenetic role in many disorders. It should be noted that the first changes in the cardiovascular, skeletal and central nervous systems begin already in the premenopausal period . During this period, the production of osteoclasts increases, the production of osteoblasts decreases, the absorption of calcium in the intestine decreases, and there is a lack of vitamin D , which leads to increased bone resorption. The menopausal period is a period for the

occurrence of emotional disorders of varying severity, from a slight decrease in mood and anxiety to depression.

The main symptoms and signs of menopause are divided into two groups: early and late. Early symptoms include hot flashes, sweating, depression, excitability, irritability, sleep disturbance, memory loss, dry mucous membranes. Late symptoms include metabolic (central and abdominal fat deposition), cardiovascular (atherosclerosis), musculoskeletal (accelerated bone loss - osteopenia , osteoporosis, increased risk of fractures, sarcopenia) disorders.

Materials and methods.

The subject of the study is planned to be 80 women aged from 35 to 60 years. The subject of the study will be clinical and laboratory-instrumental assessment of periodontal status, as well as the state of mineral density of bone tissue and blood circulation in periodontal tissues.

The work will use modern methods of collecting and processing materials, followed by statistical processing of the results obtained.

Diagnosis of periodontal diseases is based on a clinical examination, consisting of a survey, examination of patients, assessment of dental and periodontal status (measurement of the depth of periodontal pockets, bleeding gums, periodontal and hygienic indices) and x-ray examination, which determines the level of alveolar bone. However, conventional diagnostics fail to identify highly sensitive patients who are at risk of disease progression. As a result, it is necessary to establish effective markers that indicate the progression of periodontitis.

According to modern concepts, the development of periodontal diseases is accompanied by the appearance of specific bacteriological flora. Produced by periodontopathogenic bacteria P. intermedia , T. forsythia , T. denticola , A. actinomycetemcomitans , P. gingivalis exo- and endotoxins determine the duration of inflammation, leading to the destruction of gum tissue and alveolar process.

Research results and discussion

In accordance with the purpose of the study and the set objectives of the work, all patients participating in the study underwent a comprehensive examination, including taking an anamnesis, studying the clinical and radiological condition of the oral cavity and periodontal tissues, as well as studying the qualitative and quantitative composition of the microflora of periodontal pockets.

Clinical examination of patients began with collecting anamnesis. Particular attention was paid to hereditary burden of periodontal diseases, the patient's general health status, previous and concomitant diseases, medication intake were assessed,

and the presence of bad habits was clarified (smoking, abuse of carbohydrate foods, etc.) . During the survey and history collection, the patients' complaints and their nature were clarified (bleeding gums, the nature of its occurrence: during eating or brushing teeth, dry mouth, increased sensitivity of the teeth, dysfunction of the dental system).

During the external examination of the patients, the configuration of the face, the color of the skin, the red border of the lips were assessed, and the regional lymph nodes were palpated. We also studied the condition of the temporomandibular joint, assessing the nature of the movement of the lower jaw, the presence of clicks and pain.

When examining the oral cavity, the location of the frenulum and cords, the depth of the vestibule were assessed, the tongue, palate, and tonsils were examined. The condition of the oral mucosa, its color and degree of moisture were assessed. Pathological changes in the mucous membrane were detected. When registering the dentition, carious, filled and extracted teeth were recorded, the presence of splinting structures, removable and non-removable orthopedic structures, and an index assessment of the condition of periodontal tissues was carried out. We also paid attention to the presence of non-carious dental lesions: erosions, wedge-shaped defects, pathological abrasion of teeth.

Conclusions.

Over the past decade, the average life expectancy of a woman has increased significantly and, accordingly, most of it, namely 2/3 of life, is postmenopausal. Women's health is a global health concern. The average age at menopause in our study in the group of women not taking HRT was 51.94±2.1, and in the group taking HRT - 49.09±1.9, which is consistent with the data of V.P. Smetnik et al.

Undesirable symptoms noted by patients during this period are the result of a number of systemic processes occurring in the woman’s body, namely due to the cessation of endocrinological activity of the ovaries.

It is known from the literature that the oral mucosa contains estrogen receptors, and as a result, hormonal changes can influence the development and progression of dental diseases. Estrogen deficiency , affecting the maturation of the epithelium of the oral mucosa, can lead to its thinning and atrophy, thereby making it more susceptible to local mechanical damage. Due to atrophic changes in the oral mucosa in menopausal women, diseases such as burning mouth syndrome, Wilson's lichen, idiopathic neuropathy, as well as candidiasis due to increased colonization by microorganisms in patients with reduced salivation occur.

Thus, the greater sensitivity of the above indices is associated with the peculiarities of the pathogenesis of menopause, namely estrogen deficiency. The content of estrogen receptors on the oral mucosa plays a direct role in the development of dental diseases. During menopause, the angioprotective effect of estrogens weakens with subsequent damage to the structures of the hemomicrocirculatory bed. Also during this period, the production of osteoclasts increases, the production of osteoblasts decreases, the absorption of calcium in the intestine decreases, and there is a lack of vitamin D, which leads to increased bone resorption.

Due to estrogen deficiency, there is a decrease in intestinal absorption of calcium in the body, which in turn leads to disturbances in the regulation of calcium-phosphate metabolism and increased release of calcium not only into the blood serum, but also into saliva. Consequently, high concentrations of calcium in the saliva of menopausal women may lead to faster mineralization of plaque and therefore increased stone formation, which has a direct impact on the progression of gingivitis and periodontitis. Thus, the pathogenesis of menopause affects the condition of all structures of the oral cavity.

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