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MODERN METHODS OF RESEARCH OF PERIODONTAL DISEASES IN WOMEN

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Annotation:
Numerous studies have shown that a decrease in the concentration of estrogen leads to osteoporosis in the bones of the skeleton, which is characterized by a decrease in bone mass and a decrease in its density, which, in turn, may be a risk factor for the progression of periodontal diseases [6,8,7]. According to the research results, the most common dental disease among women during menopause is periodontitis, which, according to some studies, occurs in 80% of women [4,2]. Periodontal diseases, which are the cause of most cases of tooth loss, are a chronic focus of infection that has a negative impact on the health of the body and the quality of life in general. According to most researchers, the most important role in the development of periodontal pathology is assigned to the microbial factor [3.13].
It was found that the age of onset of natural menopause depends on genetic factors related to the region of residence, ethnicity, socio-economic status, lifestyle and culture [5].
The early age of natural menopause is associated with a reduced risk of breast cancer, ovarian cancer and, conversely, with an increased risk of cardiovascular diseases, atherosclerosis, stroke and osteoporosis. It was found that mortality from all causes decreases by 2% with each subsequent year of menopause [9]. The risk of death of women after menopause in women is 2-3 times higher than in men of the same age [5,4]. It reveals the trend of the late onset of menopause with excessive weight. This is due to the higher levels of estrogen in overweight and obese women, which may lead to delayed menopause [11].
Most researchers believe that the extinction of ovarian function is genetically programmed. Over the course of a lifetime, the number of follicles embedded in the ovaries gradually decreases. Therefore, the function of the hypothalamic-pituitary system changes for the second time in response to the lack of estrogen. Due to the increase in the secretion of gonadotrophins in the hypothalamus and the increase in the secretion of gonadotrophins in the pituitary gland, the synthesis of estrogen and progesterone gradually decreases in the process of complex functional and biochemical changes leading to the depletion of follicles and their resistance to gonadotrophin stimulation.

Estrogen deficiency plays a pathogenic role in many diseases. It should be noted that the first changes in the cardiovascular, skeletal, and central nervous system have already begun before menopause [12]. During this period, the production of osteoclasts increased, the production of osteoblasts decreased, the absorption of calcium in the intestine decreased, and vitamin D deficiency led to increased bone absorption [6]. Menopause is the period when mood disorders of varying severity occur from a slight decline in mood and anxiety to depression [150].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 disorders, memory loss, and dry mucous membranes. Advanced symptoms include metabolic (central and abdominal fat deposits), cardiovascular (atherosclerosis), skeletal muscle (accelerated bone loss-bone loss, osteoporosis, increased risk of fractures, nodular reduction) disorders [5,4].

Materials and Methods

It is planned to study 75 women aged 35 to 60 years as subjects. The topic of the study will be clinical and laboratory instrumental assessment of the state of periodontal diseases, as well as the state of bone mineral density and blood circulation in periodontal tissues.

In this work, modern methods of collecting and processing materials will be used, and then statistical processing of the results obtained.

Diagnosis of periodontal diseases is based on clinical practice, including examination of patients, assessment of the condition of teeth and periodontal (measurement of the depth of periodontal pockets, bleeding gums, periodontal hygiene index) and X-ray examination to determine the level of alveolar bone [3,6]. However, traditional diagnostics does not allow identifying highly sensitive patients at risk of disease progression [9]. Therefore, it is necessary to establish effective markers indicating the progression of periodontitis.

According to modern ideas, the development of periodontal diseases is accompanied by the appearance of a specific bacterial flora. It is caused by periodontal pathogenic bacteria P.intermedia, T.forsythia, T.denticola, A.actinomycetemcomitans, R.Exotoxins and endotoxins produced by gingivalis determine the duration of inflammation leading to the destruction of gum tissue and alveolar processes.The main diagnostic types of periodontal pathogens are microscopic, bacteriological and molecular genetic. The microscopic method gives general characteristics of the microbial flora and does not allow to determine the type of bacteria. Traditional microbiological methods for the study of periodontal diseases include sowing

microorganisms on special nutrient media and their subsequent identification and species identification. They have many disadvantages: they are limited to explaining the irreversible process of tissue destruction, and the duration of the study is 5-7 days. It is necessary to use specific nutrient media and special conditions are created for your culture.Early detection of microorganisms, prevention of their prevalence to prevent inflammation-the destructive process of periodontal tissues is an urgent task in modern dentistry. To date, the most accurate and modern diagnostic method is molecular genetic methods, especially polymerase chain reaction (PCR), which makes it possible to achieve a significant increase in the small concentration of certain fragments of nucleic acids (DNA) in biological materials.

Research Results and their Discussion

According to the purpose and work objectives of the study, all patients participating in the study received a comprehensive examination, including the collection of medical history, the study of the clinical and radiological status of oral and periodontal tissues, and the study of the periodontal pouch flora. The clinical examination of patients began with the collection of anamnesis. Pay special attention to the genetic burden of periodontal disease, assess the patient's general health, metastatic and concomitant diseases, take medicines, and clarify bad habits (smoking, abuse of carbohydrate foods, etc.).The existence of). During the investigation and collection of anamnesis, the patient's complaints and their nature were clarified (bleeding gums, the nature of their appearance: dry mouth during meals or brushing teeth, tooth allergies, impaired dental system function).

During the patient's external examination, the configuration of the face, the color of the skin, the red border of the lips, and the palpation of the regional lymph nodes are evaluated. The condition of the TMJ was also studied, and the nature of jaw movement, clicks and pain were assessed.

The position of the reins and ropes was evaluated, the depth of the vestibule was checked during the examination of the oral cavity, and the tongue, palate, and tonsils were checked. The condition of the oral mucosa, its color and moisture level were evaluated. Pathological changes in the mucosa were detected. When registering a dental row, record the presence of caries, filled and removed teeth, splint structures, detachable and non-detachable orthopedic structures, and conduct an index assessment of the condition of periodontal tissue. They also noticed the presence of non-caries lesions of the teeth: erosion, wedge-shaped defects, pathological tooth erasure.According to the survey results, compared with women who did not take HRT (60%; 40%, respectively), postmenopausal women who took HRT complained of

bleeding gums (25.7%) and dry mouth (17.1%) 2.3 times less. 17.1% of women taking HRT reported bad breath, which was 2.5 times less (42.9%) than women who did not take HRT, but 3 times more than the control group (5.7%). Postmenopausal women, regardless of whether they took HRT or not, were 3 times more likely to notice white plaques on the tongue than the control group (5.7%) (17.1% and 14.3%, respectively). 5.7% of women in the second group and 2.9% in the third group.Women notice a burning sensation in the mouth

Conclusion:

Over the past ten years, the average life expectancy of women has increased significantly, so most of them, that is, 1/3 of life expectancy, are postmenopausal. Women's health is a common health problem. The average age of menopause in the group of women who did not take HRT in our study was 50.97±1.9, and in the group who took HRT - 51.12±1.8, which corresponds to the V.P. indicator.The data of Smetnik and his co-authors are consistent.

The adverse symptoms noticed by patients during this period are the result of some systemic processes occurring in the female body, that is, due to the cessation of endocrine activity of the ovaries.

It is known from the literature that the oral mucosa contains estrogen receptors. As a result, hormonal changes can affect the development and progression of dental diseases. Estrogen deficiency affects the maturation of the epithelium of the oral mucosa, which can lead to its thinning and atrophy, making it more susceptible to local mechanical damage. Due to atrophic changes in the oral mucosa, postmenopausal women develop diseases such as burning mouth syndrome, Wilson's lichen, idiopathic neuropathy and candidiasis caused by increased colonization of microbes in patients with reduced salivation [

Currently, perimenopausal patients use hormone replacement therapy, the purpose of which is to reduce bone loss, prevent osteoporosis and improve the condition of teeth, which is an effective way to treat the symptoms of oral menopause.

In this regard, the purpose of our study is justified: to increase the effectiveness of dental care for postmenopausal women on the basis of determining the characteristics of dental status that depend on taking hormone replacement therapy drugs.

Due to the relevance of the issues identified as a result of the analysis of scientific literature and systematized results, we offer a comprehensive assessment of the condition of women's teeth during menopause, depending on the use of hormone replacement therapy, based on The survey of respondents is necessary for the early detection of menopause symptoms in the oral cavity. In our study, the most common

and major complaints of postmenopausal women were bleeding gums (II-60%; III-25.7%), dry mouth (II-40%; III-17.1%) and bad breath (II-42.9%; III-17.1%). Previous studies have shown that burning mouth syndrome is considered one of the main oral problems in women during menopause. Dry mouth is one of the main causes of oral discomfort. It often occurs in postmenopausal women and is directly related to changes in the quantity and/or quality of saliva. 在J.N.In In the Rukmini study, 57.5% of postmenopausal women complained of dry mouth. Other less common symptoms associated with menopause include changes in taste, viscosity of saliva, and pathological changes in mucous membranes, such as lichen planus, benign mucosal pemphigus, and sjogren's syndrome [6,7].

Many studies have proven the need to choose separate additional oral hygiene products, because the main etiological factors in the development of dental diseases are the pathogenic effects of biofilm flora, its formation and poor-quality oral hygiene care. In our study, it was found that as an additional means of oral hygiene, survey participants most often used mouthwash (I-31.4%; II-42.6%; III-51.4%), dental floss (I-40%; II-37%; III-26.6%) and toothpicks (I-28.5%; II-66.7%; III-60%), at least in all rinses (I-14.3%; II-17.1%; III-14.3%).) And interdental brushes (I-0%; II-5.7%; III-2.8%), none of the study participants used tongue scrapers.

In Z.S.In Budaichieva's work, 53.1% of participants used rinsing agents as additional hygiene products, 44.9% used toothpicks, 23.6% used tongue scrapers, 7.7% used dental floss, 6.4% used interdental brushes, and only 4.4% used rinsing devices. According to Z.S.Budaichiev and our own research results show that most respondents do not use endodontic hygiene products: interdental brushes and irrigators [7]. This may be due to their low level of dental education and lack of awareness of the choice of personal hygiene products.

Our research shows that postmenopausal women who do not take HRT have very high levels of caries intensity (CPI index=17.8±5.15), and women who take HRT have very high levels of caries intensity (CPI index=15.45±5.2). At the same time, there was no significant difference between the group of patients taking HRT and the group of patients not taking HRT. Previous studies on the impact of menopause on the intensity of dental caries have revealed statistically significant differences between postmenopausal women and women of childbearing age.

Studies on the hygiene of postmenopausal women have shown that the level of oral hygiene is low. The OHI-s feminine hygiene index (OHI-S=2.99±0.99) of women who did not take HRT was twice that of women who took HRT (OHI-S=2.24±1.4), which was 1.7 times worse than that of the control group (OHI-S: 1.73±1.1). Statistically significant differences were shown between groups I and II and between groups II and

III ($p<0.05$). There was no statistically significant difference between group I and Group III ($p>0.05$). This is consistent with data from other authors on menopause and violations of oral hygiene.

J.N.Rukmini and his co-authors studied the dental conditions of postmenopausal women and women with regular menstrual cycles. 82.5% of postmenopausal women had poor oral hygiene, compared with 6% of women in the control group and 2.5% of postmenopausal women. Good oral hygiene-67.5%. Hygiene of the control group.

Risk factors for osteoporosis have been identified in more than 80% of perimenopausal women [5,3]. Hormonal fluctuations that increase the level of bone tissue assimilation lead to a decrease in the mineral content of the bone matrix and bone tissue. As a result, bone density decreases, leading to fractures. On the contrary, periodontitis is characterized not only by the reabsorbment of the alveolar bone, but also by the inflammatory process of the periodontal cavity. Osteoporosis and periodontitis are chronic multifactorial diseases that cause bone loss. Local and systemic factors can worsen bone loss.

The data we obtained show that the periodontal condition of postmenopausal women worsens, and there is a statistically significant difference between the groups taking and not taking HRT, reflecting a 2-fold increase in group II diseases (PI: 2.31±1.29, and this

The data obtained are consistent with those of other authors. In his research, D.Deep revealed that the average periodontal index PI of postmenopausal women is 4.34, which corresponds to the severity of periodontal disease. Consequently, the greater sensitivity of the above indicator 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 [11,4]. During menopause, the vasoprotective effect of estrogen weakens, followed by damage to the structure of the bloodstream. Also during this period, the production of osteoclasts increased, the production of osteoblasts decreased, the absorption of calcium in the intestine and vitamin D deficiency decreased, which led to an increase in the absorption of bone tissue.

Due to estrogen deficiency, calcium absorption in the body through the intestine decreases, which, in turn, leads to disturbances in the regulation of calcium phosphate metabolism and increased calcium release not only into serum, but also into saliva. Consequently, high concentrations of calcium in the saliva of women during menopause can lead to faster mineralization of plaques, thereby increasing the formation of stones, which has a direct impact on the progression of gingivitis and periodontitis. Consequently, the pathogenesis of menopause affects the condition of

all structures of the oral cavity.

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