

Chronic Diffuse Periodontitis Due to Osteoporosis in Women with Breast Cancer of Fertile Age

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Abstract: At the present stage of the development of dentistry, the diagnosis of periodontal pathology does not cause any special difficulties. The identification of clinical signs and characteristics of periodontal diseases, the prediction of the development of the disease, the relationship with the general condition of the patient requires additional analysis in relation to bone changes in the maxillary-alveolar system.

Keywords: dental defects, periodontal disease, hormones, densitometer, menopause, periodontal pocket depth, osteocalcin, resorption.

Menopause is a physiological process in a woman's life and an irreversible process of hormonal ovarian function. During the reproductive period of a woman's life, estrogens constantly affect various organs and tissues, their specific binding sites interact with estrogen receptors. These receptors are localized, in particular, in the uterus, mammary glands, brain and heart, oral mucosa, larynx, periodontal tissues. During menopause, estrogen deficiency can cause pathological changes in all these organs, including periodontal disease. Estrogens affect the mucous membrane of the oral cavity directly or through the neuroendocrine system, and the condition of the gums changes in women. A decrease in the effect of estrogen on the salivary gland leads to a decrease in salivation, which contributes to impaired taste perception, dry mouth, atrophic gingivitis and the development of periodontitis. [1.3.5.7.9].

According to statistics, 45-60% of postmenopausal women were diagnosed with periodontal diseases, including changes in the body's bone tissue. At the present stage of the development of dentistry, the diagnosis of periodontal pathology does not cause any special difficulties. The identification of clinical signs and characteristics of periodontal diseases, the prediction of the development of the disease, the relationship with the general condition of the patient requires additional analysis in relation to bone changes in the maxillary-alveolar system.

Chronic generalized periodontitis (CGP) is a multifactorial disease, in the formation of which it is important to systematically determine the factors of the oral cavity and periodontal homeostasis that affect the virulence of microflora, contributing to the formation of microbial plaque. The relationship between oral bacteria and the resistance of oral tissues and the body as a whole ensures the development and management of periodontal resistance. [2.4.6.8.10].

Women with breast cancer were taken under the control of the dispensary of the Bukhara branch of the Republican Specialized Scientific and Practical Medical Center of Oncology and Radiology. 155 women participated in the study, 104 of whom were diagnosed with breast cancer. We found that all 57 women were diagnosed with perimenopausal breast cancer in three groups (average age 43+6.4 years). An additional group consisted of 48 patients diagnosed with postmenopausal breast cancer (average age 59+5.2 years), since osteoporosis is most common in postmenopausal women. 50 of them are healthy women with regular menstruation [11.12].

The duration of postmenopause during treatment is 6.5%. A clinical examination of the oral cavity of women with breast cancer was conducted in order to determine the condition of the teeth, the presence

of hard dental tissues, the type of bite, protruding folds, the presence of subgingival and supra-gingival solid carious deposits, the condition of the oral mucosa (edema, hyperemia, bleeding), the state of exudate, the presence and depth of periodontal pockets, determination of the degree of pathological mobility of teeth. Attention was paid to the timing of the appearance of inflammatory changes in periodontal tissue and their connection with the onset of menopause. The results of the survey are presented in the table below.

Table 1. CHANGES IN THE ORAL CAVITY IN HDP IN PATIENTS WITH BREAST CANCER

Indicators	Группа больных	
	Women with perimenopausal breast cancer n=55	Women with perimenopausal breast cancer n=57
Hygiene Indexes (OHI-S)	2,29±0,05	2,55±0,07*
	2,19±0,05	2,32±0,04*
Degree of bleeding	2,29±0,07 2,52±0,08#	2,45±0,04* 2,88±0,06*#
RMA	51,32±1,80	61,68±1,93*
	55,43±2,15#	69,88±2,17*#
pi	4,82±0,15	6,12±0,13*
	4,56±0,18#	5,87±0,15*#
The depth of the periodontal pocket, mm	5,22±0,21	6,75±0,44*
	4,75±0,15	5,49±0,27*
Fuchs index for the upper jaw	0,58±0,06	0,45±0,04*
	0,60±0,03	0,48±0,03*
Fuchs index for the lower jaw	0,60±0,04	0,48±0,03*
	0,62±0,03	0,50±0,03*
Cortical index	4,68±0,03	4,40±0,03*
	4,70±0,05	4,55±0,04*

Periodontal patients complained of bleeding during tooth brushing, mobility of a certain group of teeth, bad breath, swelling and bruising in the gums and gingival suckers. On examination, hyperemia, cyanosis in the gums were noted, when probing periodontal pockets at a depth of 4-5 mm, the level of bleeding gums was 3 points, pathological tooth mobility of 1-2 degrees. During the examination of the second patient, a small amount of pus was recorded in the periodontal pocket. The hygienic index was equal to 2.19±0.05 - 2.29±0.05, PMA - 51.32±1.80 - 55.43±2.15, PI - 4.56±0.18 - 4.82±0.15. The X-ray revealed resorption from 1/3 to 1/2 of the interalveolar cell of the tooth root, this corresponds to the destruction of bone tissue in the alveolar part of the jaw and pathological displacement of teeth of 1-2 degrees. The Fuchs bone index of the upper jaw was 0.58±0.06 - 0.60±0.03, the Fuchs bone index of the lower jaw was 0.60±0.04-0.62±0.03.

It was reported that patients with severe forms of chronic diffuse periodontitis complained of bleeding gums, tooth mobility, bad breath, and high sensitivity of teeth to cold. On objective examination, the level of bleeding gums is 3 points, the gum area is convex, there are gingival pockets, the tooth is surrounded by hard deposits around the gums [9.11.12].

The depth of the periodontal pocket reaches 5-8 mm. In some cases, it was found that there are purulent discharge in the periodontal pocket, teeth are displaced by 2-3 degrees. PMA - 61.68±1.93 - 69.88±2.17, PI - 5.87±0.15-6.12±0.13. The bone index of the Fuchs of the upper jaw was 0.45±0.04 - 0.48±0.03, the bone index of the Fuchs of the lower jaw was 0.48±0.03 - 0.50±0.03.

According to the data presented in the table above, inflammatory components were evident in the clinical picture of CDP in patients of reproductive age, this led to a significant increase in CDP in postmenopausal women with breast cancer. On the contrary, the indicators of the periodontal index were low in the elderly. Depending on the degree of periodontal lesion, bone resorption did not have a significant difference when compared between the upper and lower jaw, depending on the age group.

Table 2. Results of densitometry in elderly patients with chronic diffuse periodontitis

INDICATORS	Группы	
	Healthy women of reproductive age Нрр n =30	Women with breast cancer, postmenopause n=40
T total	0,66±0,04	0,22±0,04*
TL1-4	0,58 ± 0,03	-0,15 ± 0,05*
T neck	0,85±0,05	0,42±0,06*
T total hip	0,90±0,05	0,37±0,04*

Among healthy women of reproductive age (according to the T-criterion), in patients with chronic diffuse periodontitis, resorption in various parts of the bone plate was normal and moderate. The average value of the T-test was within the normal range. From the data presented in the table, it can be seen that in chronic diffuse periodontitis of moderate severity, the level of osteocalcin CL is not accompanied by significant changes, while in bone resorption in severe chronic diffuse periodontitis, a significant decrease in the level of osteocalcin CL is observed.

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