Clinical Diagnostic Evaluation And Treatment Of Oral Diseases In Women With Osteoporosis

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Relevance of the research: Osteoporosis causes problems for all types of doctors, including dentists, with its multifaceted effects on the body. This disease is a widespread disease not only in Europe and America, but also in Asian countries (Rozhinskaya L.Ya., 2007; Mulligan R., Sobel S., 2005).It is known that the violation of the structure and function of the alveolar bone in general osteoporosis has a very negative effect on the periodontal tissue (Povoroznyuk V.V. et al., 2003; Mukhamedjanova L.R., 2005; Shtorina GB. i et al., 2005), as a result of this the cause, together with other negative factors, leads to early tooth loss.

Worldwide, the average age at which menopause occurs is 50.0 years, and this is greatly influenced by the region in which a woman lives. Thus, the average age at which menopause occurs in Uzbekistan varies from 49 to 51 years. It is 47.4 years in the southern regions, 48.4 years in the central regions of the country, and the highest indicator is up to 50.6 years in the western regions. The youngest average age at which menopause occurs is recorded in countries with a warm climate: Africa, Latin America, followed by Europe, Australia, and the United States [2,4].

In Russia, more than 21 million women are peri- and post-menopausal, and a third of them live in conditions of estrogen deficiency.

It has been noted that young women who experience natural menopause depend on genetic factors related to the region of residence, race, socio-economic status, lifestyle and culture. Menopause has been found to occur later in women who are overweight, have a high physical load, and have a higher education and a job. Smoking has been shown to reduce the age at which menopause occurs by 1 year.

The purpose of the study: to diagnose dental diseases in women with osteoporosis during menopause.

Research material and methods: During the research period, 150 menopausal women aged 45-55 years old, 45-55 years old, who were registered as "D" according to the address of residence in Bukhara city and district polyclinics, were conducted in 2020-2022 on the basis of the Department of Therapeutic Dentistry of the Bukhara State Medical Institute. postmenopausal women with and without osteoporosis were examined. Women between the ages of 45 and 55 are considered to be at high risk for osteoporosis during menopause.Age levels of women based on osteoporosis during menopause are compiled according to the WHO classification (Table 1). 64 (42.6%) age group from 45 to 47 years old, 44 (29.3%) age group from 48 to 51 years old, 42 women aged 52-55 years old (28.1%) study was within the range of the observation group. The control group consisted of 32 women of fertile age of 25-35 years with regular ovulatory menstrual cycles. A total of 182 women were examined during the study.

Table 1
Age levels of examined female patients in study groups.

	Research groups				
	Monitoring				Control
	Group I	Group II	Group III	Group IV	
Numberofpatients	44	30	41	35	32
Ageofthepatient	45,73±3,3	42,48±1,3	48,94±3,6	53,45±2,4	25,05±10,3
Total	150				32

Group I, women with osteoporosis during menopause, consisted of 44 women. Group II patients included 30 postmenopausal women without osteoporosis, Group III included 41 women with postmenopausal osteoporosis, and Group IV included 35 postmenopausal women without osteoporosis. The control group consisted of 32 women of fertile age with regular ovulatory menstrual cycles. The distribution of women by group is presented in Table 2 (Figure 2)

In accordance with the purpose of the study and the tasks defined in the work, a comprehensive examination was carried out on all patients participating in the study, which included the collection of anamnesis, the clinical and radiological condition of the oral cavity and periodontal tissues, as well as the study of the qualitative and quantitative composition of the microflora in the periodontal pockets.

Results and analysis: Clinical examination of patients began with the collection of anamnesis. Particular attention was paid to the genetic predisposition to periodontal diseases, the general state of the patients' health, the experienced and related diseases, the reception of drugs were evaluated, the presence of harmful habits was determined (smoking, excessive consumption of carbohydrate-rich foods, etc.). During the collection of the questionnaire and the anamnesis, the patients' complaints and their nature were determined (bleeding from the gums, the nature of its occurrence: during eating or cleaning the teeth, dryness of the oral cavity, high sensitivity of the teeth, disorders of the dental-jaw system).

In the appearance of the patients, the indicators of the face, skin covering, the color of the red border of the lips were evaluated, palpation of the regional lymph nodes was carried out. Also, the condition of the temporomandibular joint was studied, the nature of movement in the lower jaw, as well as the presence of gnawing and pain were evaluated.

When the oral cavity was examined, the location of the uvula and zygoma, the depth of the oral cavity, the tongue, palate, and tonsils were examined. The condition of the mucous membrane in the oral cavity, its color and moisture level were evaluated. Pathological changes were detected in the mucous membrane. When the tooth rows were registered, the presence of caries, filled and removed teeth, splinting structures, removable and non-removable orthopedic structures was noted, and the condition of periodontal tissues was evaluated as an index. Attention was also paid to non-carious damage of teeth: erosions, follicular defects, pathological decay of teeth were taken into account.

The simplest criterion for evaluating oral hygiene is the numerical calculation of the surface of the teeth covered by dental plaque. For this we used the Green-Vermilon method. G. Green and Wermillon I.R. (1964) proposed a simplified index of oral hygiene, OHI-S (Oral Hygiene Indices-Simplified). To determine OHI-S, the surfaces of the following teeth are studied: facial and lingual surfaces 5|5 6|6 and lip surface 1|1. All surfaces are pre-dented. The amount of staining on the surface of the teeth is determined as follows: six permanent tooth surfaces are painted with iodine-containing mixture - the labial surface of the upper central incisors, the vestibular surface of the upper first permanent large molar teeth, the lingual surface of the lower first permanent large molar teeth.

The depth of periodontal pockets was studied using a graduated periodontal tube, measurements were made at 6 points around each studied tooth (three points on the vestibular surface and three points on the oral surface).

During the study, we found that such a method of examination is very important in women with osteoporosis during menopause. We used x-ray, computer tomography, orthopantomography examination methods. Today, light diagnostic methods are of great importance in the diagnosis of diseases. Medical radiology is one of the youngest and currently

dynamically developing sciences of medicine. Today, there are various methods at the disposal of doctors.There are indications and contraindications for radiological examination. Rules for appointment of X-ray examination, issuing a referral for examination. X-ray image formation and its properties (summation, image, superposition and subtraction of shadows, tangential effect, changes in the size and shape of the object in the projection image).

1- Figure: Patient N, 49 years old

The severity of periodontitis was determined based on the depth of PCh and the level of destruction of bone tissue. Thus, in the mild degree of UP, the PCh was up to 3 mm, and the X-ray image confirmed the initial signs of destruction of the walls between the teeth. In the middle level of UP, the depth of periodontal pockets varied from 3 to 6 mm. The destruction of the bone tissue of the cortical plate and the barrier between the teeth was up to V part of the root length in the X-ray study. The severe degree of UP was characterized by the presence of periodontal pockets larger than 6 mm, pathological mobility of teeth at 2-3 levels, destruction of the cortical plate and bone tissue in more than V of the root length.
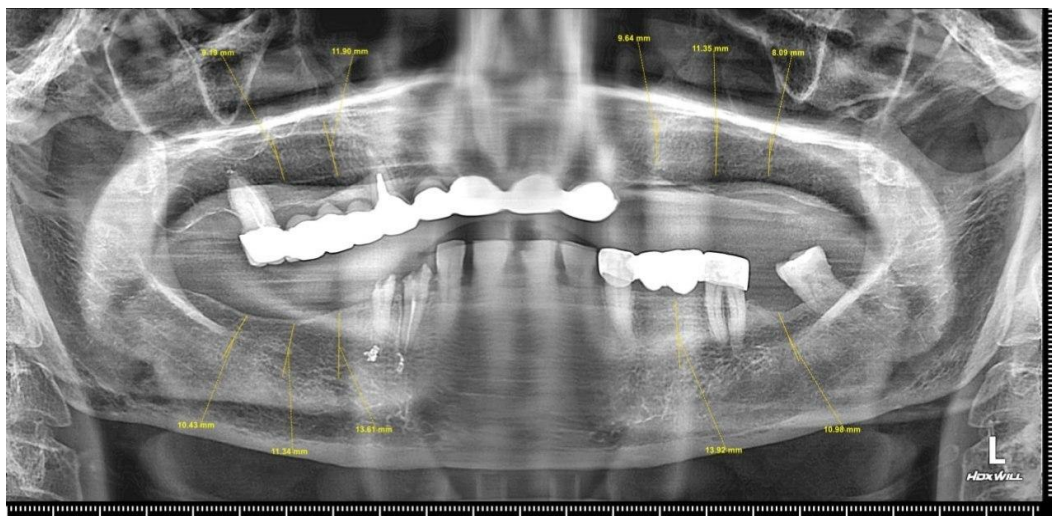
2- Figure. Patient R, 53 years old, severe osteoporosis

Examination of patients was carried out at the base of the bacteriological laboratory of the sanitary-epidemiological station of the Bukhara region.

Material for microbiological analysis was obtained as follows:

Saliva was collected into a sterile test tube by spitting in an amount of 1 ml;

The contents of the gingival canal were collected using a sterile cotton swab and placed in a sterile test tube containing 1 ml of saline.Microorganisms were isolated by inoculating the obtained materials on artificial nutrient media. The method of cultural analysis was used: 0.1 ml of saliva was taken from a test tube with physiological solution, as well as the contents of the gum canal, all of which were placed in the nutrient medium. The material was seeded on agar in a Petri dish: the material under study was pipetted and spread over the entire surface of the agar.

To determine the entire microflora in the oral cavity, they were cultured on blood agar. The following technology was used to obtain blood agar: pH 7.5 supply agar was heated and cooled to 50oC, then animal (sheep, rat) blood was added. The blood agar was thoroughly rinsed without foaming and poured into 3-4 mm x Petri dishes. Cultivation was carried out in a thermostat at 37oC for 20 hours.

During the analysis of the obtained data, the formed colonies that can be included in the type of microorganisms during the growth were counted. Gold (S. aureus) or white (S. epidermidis, S. saprophyticus) colonies are typical for staphylococcal flora. Colonies of micrococci are yellow or pink in color.

Since the main number of strains of S. aureus and S. epidermidis was erythrocyte solution, a clear hemolysis zone appeared around the colonies.

We counted the amount of colonies formed on the nutrient media. 0.1 ml of oral fluid and 1 ml of physiological solution and 0.1 ml of a test tube containing the contents of the gum canal were used.

In healthy mucosal smears, only cells of the late stage of differentiation are detected. The use of the cell differentiation index to evaluate the cytograms of the lesions of the mucous membrane of the gums (MShQ) showed the clarity and convenience of this indicator for practical observation in the dynamics of the disease. It is also possible to draw certain conclusions about the nature of the microflora on ointment preparations. In the absence of pathological changes in the soft tissues of the periodontium, the cytological picture taken from the examination of the gum traces was characterized by multi-functional changes in which the gingival transudate or exudate accumulated in the case of periodontitis.

Conclusion: Thus, osteoporosis is a disease with a decrease in bone mineral density and a violation of the microarchitectonics of bone tissue, which is more common in women during perimenopause, among the risk factors for this disease are lack of Ca in the blood, vitamin D deficiency, taking glucocorticoids for more than 3 months occupies the leading position. place. General osteoporosis in women causes dental diseases and requires the organization of dental care for women of this contingent.

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