International Journal of Medical Sciences And Clinical Research

VOLUME Vol.05 Issue12 2025
PAGE NO. 10-13
DOI 10.37547/ijmscr/Volume05Issue12-03

Osteoporosis Diagnosis And Prognosis In Perimenopausal Women

Nazirova Muyassar Ubayevna
Candidate of Medical Sciences, Dosent, Tashkent State Medical University, Tashkent, Uzbekistan

Kattahodjaeva Mahmuda Hamdamovna
Doctor of Medical Sciences, Professor, Tashkent State Medical University, Tashkent, Uzbekistan

Received: 12 October 2025; **Accepted:** 04 November 2025; **Published:** 08 December 2025

Abstract: The menopausal period is a physiological transition period in a woman's life, which occupies the period of time between the reproductive phase and old age.During this period, against the background of age-related changes in the entire body, nevertheless, the involution processes dominate the reproductive system and are characterized by a gradual decrease and shutdown of ovarian function.In the menopausal period, changes such as vasomotor, emotional-vegetative or metabolic disorders occur. It should also be noted in the period from adulthood to old age, against the background of age-related changes, the manifestations of an estrogen deficiency condition, due to an age-related decrease and then the cessation of ovarian function, dominate as indicated above. With the extinction of ovarian function from the body, the calcium content in the blood decreases sharply, which often causes fractures in women at this age. It must be said that the perimenopasal period of life is a kind of risk factor for bone diseases. We assessed the state of the bone system of 68 perimenopausal women aged 55 to 65 years. The condition of the women was assessed according to the following criteria: complaints, general examination, anamnesis, as well as hormonal status, blood levels of Ca and vit.D,. The transdermal gel Estrogel was used as a hormonal drug. Estrogel should be applied once daily in a thin layer to the skin of the lower abdomen, shoulder,or forearm.

Keywords: Menopause, osteoporosis, diagnosis, calcium content, estrogel, estradiol, parathyroid hormone.

Introduction: The science of natural aging processes belongs to various branches of medicine (gynecology, endocrinology, traumatology, neurology, etc.). During the climacteric period of transition from puberty to old age, against the background of age-related changes, clinical manifestations of estrogen deficiency associated with age-related decline and subsequent cessation of ovarian function predominate.

Knowledge of the processes occurring in the female body during the climacteric period allows for the early initiation of preventive measures aimed at preventing senile diseases and improving the quality of life of the elderly, as well as reducing disability associated with cardiovascular diseases and fractures. One of the best diagnostics of osteoporosis is currently osteodensitometry. Unfortunately, it is not possible to conduct osteodensitometry in a wide range of the population due to limited access and economic inexpediency. For these reasons, knowledge and consideration of risk factors are of particular importance in the diagnosis and prevention of osteoporosis. Osteoporosis is usually asymptomatic, and people with osteoporosis do not seek medical help until they experience back pain, changes in posture, or local fractures. Osteoporosis is most often diagnosed when there is a fracture that leads to premature death or loss of work capacity, limitation of self-care, and a general deterioration in the quality of life. (1, 7, 9, 12,). According to WHO, osteoporosis is the fourth leading cause of disability and death from fractures among

noncommunicable diseases. Only 25% of patients recover completely after a hip fracture, 50% of patients become disabled, and 25% of patients die from complications (2, 3, 5). According to the literature, osteoporosis is usually divided into primary and secondary (12). Primary osteoporosis is most often found in women of menopausal age, which is associated with a decrease in ovarian function. Secondary osteoporosis can develop against the background of existing extragenital diseases in adolescence: endocrine, gastrointestinal diseases, rheumatic lesions, etc. In the development of primary osteoporosis, heredity and constitutional race (white or black) play a significant role. In the development of osteoporosis, it should be noted that the following factors are important (women suffer more than men), irregular menstruation, frequent childbirth (the time between childbirth is less than 3 years), lactation > 1 year. Another cause of osteoporosis is a decrease in dietary calcium intake (< 1000 mg/day), lack of physical activity, smoking, alcohol, coffee (5 cups per day), low protein and fiber intake, and a high intake of acidic foods (1.5, 6, 9).

Objectives of the study: Early diagnosis, prevention, and treatment of osteoporosis in perimenopausal women in Uzbekistan.

METHODS

Our study included 68 perimenopausal women. Their ages ranged from 45 to 65 years. The women were examined based on their medical history (number of births, birth interval, duration of lactation, diet, etc.). All women were divided into 2 groups. The first group received the drug Durabon, which contains vitamin D3 and vitamin K2 (34 women). The second group included 34 patients who received the drug Durabon and the transdermal gel "Estrogel". Estrogel is applied to the abdomen, waist, shoulder or forearm skin with a thin layer once a day. The study determined anthropometric (height, weight, TVI), densitometry, hormonal - estriol, as well as the amount of vitamin D and Ca in the blood, which is one of the main indicators of the development of osteopenia and osteoporosis.

RESULTS AND DISCUSSION

When studying clinical signs, women mainly complained of severe back pain, 7 patients in group 1 (16.7%), moderate pain - 18 patients (53.3%), 9 women did not feel pain.

In group 2, out of 34 patients, 16 (43.8%) had severe back pain, 15 (40.6%) had moderate pain, and 5 did not have pain. Determining the height of the women being examined is of great importance. In the first group, a decrease in height of up to 10 cm was not observed. A decrease in height of up to 5 cm was observed in 9 patients (30%), and a decrease in height of up to 2 cm in 5 women (16.7%). In group 2, a height decrease of up to 10 cm was observed in 5 patients (15.6%), a decrease of up to 5 cm in 15 women (46.8%), a decrease of up to 2 cm in 9 of 12 patients (37.5%).

The amount of estriol in the blood in group 1 - unchanged in 10 women (62 pg/ml), in 10 women (33.3%) and a sharp decrease in 5 women (up to 10 pg/ml), moderately decreased (up to 15 pg/ml) - in 9 patients (23.3%). In group 2, 12 women had a sharp decrease (up to 10 pg/ml), 10 women had a moderate decrease (up to 15 pg/ml), and 12 women had a normal range (78-80 pg/ml).

Sudden urination (up to 10-12 times a day) was observed in 5 patients (17%) in group 1, urination (3-4 times a day) was bothersome in 21 patients or 73.3% of patients, and was not observed in 3 patients. In group 2, symptoms of sudden urination were observed in 2 patients, moderate urination was observed in 50% of women, and in 15 patients the clinic was not observed at all (did not bother).

Attention was paid to the curvature of women. In group 1, pronounced urination was observed in 2 patients, mild urination in 20 (60%) patients, and no deformity was observed in 12 (33.3%) patients. In group 2, 8 patients had severe osteoporosis, 17 (53.1%) had mild osteoporosis, and 5 patients had no deformity.

The levels of Ca and vitamin D in blood plasma were studied. In group 1, a sharp decrease in the indicators was detected in 3 women, below the norm in 19 (63.3%) women, and within the normal range in 8 (27%) women. The study of the same parameters among patients in group 2 showed a sharp decrease in the concentration of Ca and Vit D in blood plasma in 9 (28%), below the norm in 18 (56%) women, and within the normal range in 3 women.

Densitometric examinations in group 1 revealed severe osteoporosis in 5 patients. Osteopenia was detected in 15 (43%) women, and no signs of osteoporosis were detected in 14 (47%) women. Our study revealed a decrease in estradiol levels with age, as well as a decrease in the amount of vitamin Ca and D in the blood. Densitometric examination showed that osteopenia at the onset of the disease turns into osteoporosis with age. Based on the clinical signs of osteoporosis in perimenopausal women, it can be divided into 4 degrees. Of the 34 women in the first group, 16 had 3 births, 6 had 4, and the rest had 1-2 births. 12 women breastfed for more than 1.5 years, 13 women up to a year, and 6 women did not breastfeed. In the second group, 16 women breastfed for 2 years, 14 women breastfed for a year, and 4 women did not breastfeed. The number of abortions in both the first

and second groups was 3-5. Intolerance to dairy products was noted by 9 women in the first group and 12 women in the second group. In the first group, 4 women underwent amputation with uterine remnants due to symptomatic uterine fibroids. Age range: 45-48 years. In the second group, 3 women underwent uterine amputation at the age of 47-52 years. Clinical signs of osteoporosis are more pronounced in women who have given birth many times and breastfed for a long time, and it is important to avoid dairy products.

Thus, the data obtained show that with increasing age and lifestyle of women, a decrease in the concentration of estradiol in the blood, as well as a decrease in the amount of vitamin Ca and D in the blood, was observed. At the same time, changes were detected during the X-ray examination - several at the beginning of osteoporosis, and with age, multiple cystic changes in the bones. Densitometric examination accurately diagnoses the transition of osteopenia to osteoporosis. In the second group of patients who used Estrogel transdermal gel, women in 4-5 days compared to the first group experienced a decrease in the frequency of fractures, normalized sleep, and decreased back pain. Taking calcium preparations and vitamin D3 is also an obligatory component of any therapeutic regimen for the treatment of osteoporosis, which is associated with the frequent hypocalcemic effect of most antiresorptive drugs, and the use of Estrogel transdermal gel quickly improves the quality of life of a woman.

CONCLUSIONS

1. As a woman transitions from perimenopause to postmenopause, clinical and laboratory signs of bone loss increase, which is associated with a decrease in hormonal function and the transition from osteopenia to osteoporosis.

2. The most reliable diagnostic tests for osteoporosis are densitometry, MRI, and X-rays.

3. The use of transdermal Estrogel gel relatively quickly improves the general condition of women in the perimenopausal period, and it is very convenient and easy to use.

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