



DIAGNOSIS AND PROGNOSIS OF OSTEOPOROSIS IN WOMEN IN THE CLIMACTERIC PERIOD

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Abstract

The climacteric period is a physiological transitional period in a woman's life, covering the period between the reproductive period and old age. During this period, involutional processes prevail in the reproductive system against the background of age-related changes in the whole organism and are characterized by a gradual decrease and cessation of ovarian function. During the climacteric period, changes such as vasomotor, sensory-vegetative or metabolic disorders occur. It should also be noted that in the period from adulthood to old age, against the background of age-related changes, the manifestation of a state of estrogen deficiency prevails, which is associated with a decrease in age and the subsequent cessation of ovarian function. As the function of the ovaries fades from the body, the amount of calcium in the blood decreases sharply, which often causes fractures in women of this age. It should be noted that the perimenopausal period of life is a specific risk factor for bone diseases. We evaluated the bone system of 68 perimenopausal women aged 55 to 65 years. The condition of women was assessed according to the following criteria: complaints, general examination,



anamnesis, as well as hormonal status, the content of Ca and vit. D in the blood. Estrogel transdermal gel was used as a hormonal preparation. Estrogel is applied in a thin layer to the abdomen, waist, shoulder or forearm skin once a day.

Keywords: Climacteric period, osteoporosis, diagnostics, calcium content, estrogen, estradiol, parathyroid hormone.

Introduction:

The science of natural aging processes belongs to various fields of medicine (gynecology, endocrinology, traumatology, neurology, etc.). In 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 bone fractures. One of the best diagnoses 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 is of particular importance in the diagnosis and prevention of osteoporosis. Osteoporosis is often asymptomatic, and people with osteoporosis do not seek medical attention until they experience back pain, a change in posture, or multiple fractures. Osteoporosis is usually diagnosed when a fracture occurs, leading to premature death or disability, limited self-care, and a general decline in quality of life (1, 7, 9, 12). According to the World Health Organization, osteoporosis is the fourth leading cause of disability and death from fractures among noncommunicable diseases. Only 25% of patients recover completely from 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 most often occurs 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 youth: endocrine, gastrointestinal diseases, rheumatic lesions, etc. In the occurrence of primary osteoporosis, heredity and constitutional race (white or black) play a significant role. In the development of osteoporosis, it should be noted that it is important (women suffer more than men), irregular menstruation, frequent childbirth (the interval between childbirth is less than 3 years), lactation > 1 year. Another reason for the development of osteoporosis is a decrease in calcium intake with food (< 1000 mg/day), lack of physical activity, smoking, alcohol, coffee (5 cups per day), low protein content in food, low fiber content, and an abundance of acidic foods in the diet (1.5, 6, 9).

The purpose of the study: To conduct early diagnosis, preventive measures and treatment of osteoporosis in women of perimenopausal age in Uzbekistan.

Methods and materials

We included 68 women in the perimenopausal period. Their age ranged from 45 to 65 years. When examining women, anamnesis data was taken (number of births, birth interval, duration of lactation, diet, etc.). All women were divided into 2 groups. The first group received the Durabon preparation, which contains vitamin D3, as well as vitamin K2 (34 women). The second group included 34 patients who received the Durabon preparation and "Estrogel" transdermal gel. Estrogel is applied a thin layer to the abdomen, waist, shoulder or forearm skin once a day. The study determined anthropometric (height, weight, TVI), densitometry, hormonal - estriol, as well as the level of vitamin D and Ca in the blood, which is one of the main indicators of the development of osteopenia and osteoporosis.

Results of the study and their 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 experience pain.



In group 2, 16 out of 34 patients (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 of up to 2 cm in 5 women (16.7%). In group 2, a decrease in height 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 level of estriol in the blood in group 1 was unchanged in 10 women (62 pg/ml), in 10 women (33.3%) and sharply decreased in 5 women (up to 10 pg/ml), moderately decreased (up to 15 pg/ml) - in 9 patients (23.3%). In group 2, a sharp decrease (up to 10 pg/ml) was observed in 12 women, moderately decreased (up to 15 pg/ml) in 10 women and within the normal range (78-80 pg/ml) in 12 women.

Sudden urination (up to 10-12 times a day) was observed in 5 patients (17%) of group 1, in 21 patients or 73.3% of patients, urination (3-4 times a day) was bothersome and in 3 patients it was not observed. In group 2, symptoms of sudden urination were observed in 2 patients, the average clinic of urination was 50% of women, and in 15 patients the clinic was not observed at all (not bothersome). Attention was paid to the stooping of women. In group 1, 2 patients had sharply expressed stooping, 20 (60%) patients had mild stooping, and 12 (33.3%) patients had no deformity. In group 2, 8 patients had severe stoop, 17 (53.1%) had mild stoop, 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 found in 3 women, 19 (63.3%) were below the norm, and 8 (27%) were within the norm. 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%), 18 (56%) were below the norm, and 3 women were within the norm.

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 the amount of



estrogen with age, as well as a decrease in the amount of vitamin Ca and D in the blood. Densitometric examination shows that osteopenia at the beginning of the disease turns into osteoporosis with age. Based on the clinical signs of osteoporosis in women during the perimenopause, 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 for up to a year, and 6 women did not breastfeed. In the second group, 16 women breastfed for 2 years, 14 women breastfed for one year, and 4 women did not breastfeed. The number of abortions in both the first and second groups was 3-5. Inability to tolerate 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 appendages due to symptomatic uterine fibroids. Between the ages of 45-48. In the second group, 3 women underwent uterine amputation surgery at the age of 47-52. Clinical signs of osteoporosis are more pronounced in women who give birth frequently and breastfeed for a long time, and the inability to tolerate dairy products is significant. 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 content of vitamins Sa and D in the blood, was observed. At the same time, changes were detected in the X-ray examination - several at the beginning of osteoporosis, and with age, multiple cystic changes in the bones. Densitometric examination clearly diagnoses the transition of osteopenia to osteoporosis. In the second group of patients who used Estrogel transdermal gel, women in the 4-5th day compared to the first group experienced a decrease in the frequency of fractures, normalized sleep, and decreased back pain. Calcium supplements and vitamin D3 are also mandatory components 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 tubular bone disorders increase, which is associated with a decrease in hormonal function and the transition from osteopenia to osteoporosis.
2. The most reliable diagnostic tests for detecting osteoporosis are densitometry, MRI, and X-ray examinations.
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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