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DIAGNOSTIC ASPECTS OF POSTMENOPAUSAL OSTEOPOROSIS

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Annotation: Currently, osteoporosis (OP) represents one of the most important medical and social problems due to its high prevalence. Extent and resulting disability, significant mortality from complications. Modern strategy organization of care for patients with AP is early diagnosis with identification of a high risk of fractures and early prescribing pathogenetic treatment. The article presents modern data on epidemiology, risk factors, diagnosis and treatment of OP.

Key words: osteoporosis, epidemiology, risk factors, osteoporosis therapy.

Osteoporosis is a disease characterized by a decrease in bone mass and disorders of the microarchitecture of bone tissue, which leads to an increased risk of fractures. Osteoporosis causes a systemic decrease in bone strength, so fractures can occur even as a result of minor trauma or a fall. Fractures are the only clinical manifestation of osteoporosis, which is why it is often called the "silent disease." Osteoporosis literally means porous bones, a disease in which there is loss of bone mass, a decrease in the content of calcium and phosphorus salts (hydroxyapatites). In addition, the microarchitecture of the bone changes - changes in the bone frame. The loss of bone density and quality occurs quietly and gradually, bones become more porous and brittle, which leads to an increased risk of fractures even with minor physical activity (low-traumatic fractures). [1,2]

Osteoporosis (OP) is a systemic skeletal disease, in which bone strength decreases, leading to increased risk of fractures. Bone strength is determined is a combination of quantitative and qualitative characteristics: bone mineral density (BMD) and architectonics, bone metabolism, accumulation damage, mineralization of bone tissue. Ill- develops gradually and is often clinically is diagnosed after a fracture, which allows its characterization call it a "hidden epidemic." Population aging leads to a significant increase in the number of osteopo- rhotic fractures, especially in postmenopausal women pause. If the rates observed in the last decade increasing the life expectancy of the population and the number older people will continue, it is expected that by 2050 more the incidence of osteoporotic fractures will increase by 2.4 times [1]. According to WHO experts, AP is one of the most common diseases, which, along with infarction coma of the myocardium, oncological pathology and sudden death takes the lead place in the structure of the Disease Bridge and mortality of the population.

Of course, besides age, other factors also play a role in the processes of restoration and destruction of bone tissue: weight, height, gender, genetic predisposition, the presence of chronic diseases, and taking certain medications. According to most experts, the increase in the prevalence of osteoporosis in women compared to men over the age of 55 is associated with the emerging deficiency of ovarian hormones in women during the menopausal transition, postmenopause[3,4]. At the same time, one cannot equate the occurrence of osteoporosis with menopause; not all postmenopausal women suffer from osteoporosis. Since estrogen deficiency (insufficient ovarian function) can also occur in young women, with conditions such as lack of

menstruation (amenorrhea), early menopause, ovarian surgery, chemotherapy and radiation therapy, and aromatase blocker therapy for breast cancer, all these patients are at high risk of developing osteoporosis. Pregnancy is a significant event in the life of every woman. Pregnancy and lactation cause physiological loss of bone mass, which is restored independently within 1-2 years after the cessation of lactation. [5,6,7]

Thanks to modern reproductive technologies, it is now possible to achieve pregnancy in women with insufficient ovarian function. It is not difficult to imagine what the condition of the bone tissue will be like in these patients who are not prepared for pregnancy during pregnancy and lactation. Changes in the mineral metabolism of calcium and phosphorus affect not only the condition of the mother, exacerbating the initial deficiency of bone mass, but also the development of the fetus. Severe consequences of these disorders "Postpartum osteoporosis" is the occurrence of compression fractures of the spine in the postpartum period.[7]

Osteoporosis is a "silent" disease, manifested by the occurrence of low-traumatic fractures (vertebrae, hip, radius, humerus, tibia and pelvic bones...). Low traumatic fractures are fractures that occur when falling from a height, or with minor physical activity. Before the first fracture occurs, as a rule, patients do not show any complaints, this is the insidiousness of osteoporosis. Often underestimated, low-traumatic fractures of the bones of the wrist and ankle joints, ribs (as a consequence of osteoporosis) can subsequently lead to more severe fractures, such as fractures of the vertebrae and femur, and this in turn - a violation of an active lifestyle, disability, dependence on others .

Previous fractures and age relate to predictors of fractures regardless of BMD. In people with a fracture of any location, the risk of subsequent total fracture increases 2.2 times. Previous vertebral fractures increase the risk of subsequent pain more than 4 times. They are also predictors of rescrap from other locations, including ShBK [14]. Women suffer from AP more often than men. At 50 years old and older fractures of the radius are higher in women compared to men bones are observed 7 times more often, fractures of the joint bone are observed 7 times more often 2-3 times more often. One of the main risk factors in women is estrogen deficiency. A feature of postmenopausal OP is rapid loss of bone mass (more than 3% in year and up to 40% throughout life).

Age is the most important factor determining dividing bone mass. A decrease in density, and accordingly and strength of bone tissue, inevitably arises It occurs during the aging process of the body, starting at age 40–45 years [8,9]. Each subsequent year of a woman's life on average loses 0.86-1.21% of bone mass, and men on - up to 0.04-0.90%. Clinical studies have shown that with an increase decrease in age by 10 years the risk of vertebral body fractures increases by 94%, and with a decrease in BMD by 0.1 g/cm3 (according to loss within 10 years) the risk of fracture increases by 44%. Thus, the risk of fractures regardless of BMD significantly higher in older people. According to modern According to local data, age is over 65 years for both men and in women identified as a separate predictor of fractures bones [10, 11].

The level of bone mass is also affected by the level of physical ical activity. There is a connection between physical load and a higher level of BMD in youth age. Lack of constant physical activity can may lead to bone loss. A number of meta-analyses showed that athletes have 25% higher BMD than people with usual physical activity, and the latter are 30% higher than people with low physical activity [12]. The literature discusses the influence of factors nutrition, bad habits on the skeletal system, phosphorus phosphoric calcium homeostasis. It has been established that smokers and people who abuse alcohol, occurs loss of bone mass by 25%, and the rate of its decline is under the influence of alcohol is approximately 2 times higher than normal. BMD in smokers is 1.5-2 times lower than in non-smokers. schi. Women who smoke are significantly more susceptible risk of hip fractures than non-smokers. Currently, there is more and more evidence It is clear that the maximum BMD and its metabolic activity is genetically determined. Meta-analysis, conducted by J. Kanis [13] including 7 prospective population studies (34,928 patients), evidence-

based hall the relationship between the history of fractures in parents and increased suspected risk of any fractures in the proband, fractures against the background of AP and fractures of the spinal cord.

After making a diagnosis of postmenopausal osteoporosis or secondary osteoporosis in young women against the background of ovarian hypofunction (lack of spontaneous menstruation, ovarian surgery, chemotherapy, radiation therapy), excluding secondary osteoporosis due to the presence of diseases causing the development of osteoporosis, the doctor determines the type of therapy.

In order to prevent the development of postmenopausal osteoporosis, according to existing recommendations, hormone replacement therapy can be prescribed. Hormone replacement therapy is not used in patients for the treatment of osteoporosis, but can be used as a complex treatment therapy in the presence of other metabolic and trophic disorders of menopausal syndrome. Currently, there is a sufficient arsenal of effective drugs for the treatment of osteoporosis [14,15]. The type of therapy is determined individually for each patient, taking into account the presence of concomitant diseases. During the treatment, it is necessary to eliminate bad habits, ensure sufficient calcium intake from food, if necessary, add calcium-containing medications, vitamin D, and dosed physical activity. Treatment of osteoporosis is long-term, requiring the patient to adhere to the medication regimen and follow the recommendations of the attending physician.

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