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MANAGEMENT OF MENOPAUSAL OSTEOPOROSIS

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Menopause should be considered as a risk factor for the development of cardiovascular diseases (CVD) that triggers a whole cascade of pathological changes in a woman's body, including the development of arterial hypertension, dyslipidemia, abdominal obesity, the emergence of insulin resistance, an increase in sympathoadrenal tone, endothelial function disorders, inflammatory vascular reactions [1]. Postmenopausal women have a higher risk of developing cardiovascular diseases, precisely because of estrogen deficiency and lipid metabolism disorders [2]. One of the problems associated with the onset of menopause is the loss of bone mass, which continues to increase in postmenopause. Osteoporosis affects from a third to a half of all women in the postmenopausal period [3]. The problem of osteoporosis in women is particularly relevant due to its high prevalence and serious consequences that lead to disability, a sharp deterioration in the life quality, and an increase in mortality [4].

In women, estrogen deficiency is one of the main causes of postmenopausal osteoporosis (OP) [5]. An insufficient level of estrogen at the beginning of the menopausal transition significantly contributes to changes in bone mass and its quality, playing a significant role in the development of postmenopausal OP [6]. The development of osteopenia and OP in menopausal women is associated with a change in the production of 1,25(OH)2D3, since estrogen deficiency causes a decrease in the synthesis of the active metabolite of vitamin D and decreases the absorption of calcium in the intestine, which causes secondary hyperparathyroidism [7, 8]. Non-pharmacological methods of prevention and lifestyle modification are recommended

for all postmenopausal women, regardless of their bone mineral density, the presence of clinical risk factors for fractures. General health and the proper state of bone tissue are supported by a balanced diet with sufficient intake of calcium and vitamin D, physical activity and avoidance of bad habits [9]. Calcium is the main element in bone tissue, a direct correlation between the use of calcium and an increase in bone mineral density (BMD) has been proven. It also enhances the antiresorptive effect of estrogens on bones.

The International Osteoporosis Foundation (IOF) recommends daily calcium intake for women [1, 9, 10]. It is recommended to consume calcium (1000-1200 mg/day), vitamin D (400-800 IU/day) and proteins (1.0-1.2 mg/kg body weight per day) for the effective prevention and treatment of postmenopausal OP and reducing the risk of osteoporotic fractures. For the treatment of postmenopausal OP, drugs with antiresorptive and anabolic effects on bone are used [11]. Oral bisphosphonates are often recommended for patients diagnosed with osteoporosis and an increased risk of fractures. However, for women with intolerance to oral bisphosphonates, hormone therapy during menopause may be an alternative. [6, 10]. Similar to statins, the effect of menopausal hormone therapy (MHT) on the development of atherosclerosis and CVD is thought to be time-dependent. Studies of symptomatic postmenopausal women have shown that up to 10 years of MHT use can have a significant beneficial effect on the risk of cardiovascular disease [6]. It should be emphasized that transdermal use of estrogen, which bypasses first-pass metabolism in the liver, has a lower risk of venous thromboembolism and stroke compared to oral administration [6, 12].

Menopause and the disorders caused by it are a risk factor for the development of both cardiovascular diseases and osteoporosis, which affects up to 50% of women. Estrogen deficiency is one of the main causes of postmenopausal osteoporosis in women. Therefore, regardless of the indicators of their bone mineral density, the presence of clinical risk factors for fractures, non-pharmacological methods of prevention, lifestyle modification, and the use of calcium and vitamin D preparations are recommended for all postmenopausal women. Menopausal hormone therapy, which should be prescribed taking into account contraindications, has a beneficial effect on both the risk of developing cardiovascular diseases and osteoporosis, given that the basis of this pathology is a decrease in the level of estrogen.

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