7TH LUBLIN INTERNATIONAL MEDICAL CONGRESS

26th - 28th November 2020

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CONTEMPORARY APPROACH TO ASSESSMENT OF THE RISK OF CORONARY ARTERY DISEASE PROGRESSION ON THE BACKGROUND OF POSTMENOPAUSAL OSTEOPOROSIS

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Introduction: Since the onset of menopause, the incidence of cardiovascular pathology and changes in bone mineral density (BMD) in the female population significantly increase.
Methods: A study involved 115 women in the postmenopausal period with CAD: stable exertional angina of II-III functional class (FC) (mean age 67.07±0.92 years). Depending on the BMD state, all patients were divided into 3 groups: group 1 ? patients with normal BMD; group 2 – patients with osteopenia; group 3 – patients with osteoporosis. All patients underwent lipid profile tests, daily monitoring of ECG by Holter, two-dimensional echocardiography with dopplerography, intima-media complex (IMC) measurement. The BMD state was investigated with the help of the ultrasound densitometry, FRAX algorithm. The levels of cardiovascular and bone remodeling biomarkers were assessed by enzyme immunoassay.
Results: In our study a significant increase in the level of osteoprotegerin (OPG), oste??alcin and VEGF-A, homocysteine in parallel with the BMD disorders progression was found, mainly in women with CAD and PMO. The results of the relative risk (RR) assessment showed a probable interrelationship between the OPG, ostecalcin, VEGF-A and homocysteine level and atherogenic dyslipidemia, diastolic dysfunction of the left ventricle, dilatation of the left atrium, thickening of the intima-media complex, arrhythmic complications and vegetative imbalance development (?<0,05).
Conclusions: Determination of the levels of bone and vascular remodeling biomarkers can be used as a contemporary approach to assessment of the risk of coronary artery disease progression on the background of postmenopausal osteoporosis.

Keywords: coronary artery disease, postmenopausal osteoporosis, osteopenia, serum biomarkers, relative risk.