inflammatory complications, a decrease in antimicrobial factors and an increase in proinflammatory mediators were noted.

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PLASMA OSTEOPROTEGERIN AS A MARKER OF DOCUMENTED CORONARY ATHEROSCLEROSIS IN TYPE TWO DIABETES MELLITUS PATIENTS

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Osteoprotegerin (OPG) is a member of tumor necrosis factor superfamily, belonging to the class of inhibitors of osteoclastogenesis [1]. OPG is expressed in vivo by osteoblasts, endothelial cells, smooth muscle cells of the arteries and veins media and is a specific receptor for the ligand receptor activation of nuclear transcription factor kappa beta (receptor for receptor activator of nuclear factor kappa-B ligand - RANKL) and TNF-alpha-dependent ligand inducing apoptosis (tumor necrosis factor-related apoptosis-inducing ligand - TRAIL)[2]. Major inducers of synthesis of the latter are proinflammatory cytokines, such as interleukin (IL)-2, IL-6, monocytes chemoattractant protein-1, is produced mainly by mononuclear phagocytes [3]. In this regard, OPG is often seen as an indicator of proinflammatory activation, atherosclerosis and metabolic comorbidities. Universal biological potential of OPG, designed to control the intensity of the processes of ossification, is often used as a predictor of early atherosclerotic lesions of arteries[3]. Also, it has found a strong association between the concentration of OPG, the risk of stroke, ischemic heart disease, stable angina, as well as the severity of coronary atherosclerosis, as measured by the total value of the latter and the severity of coronary calcification [4]. In addition, OPG is likely to have an acceptable predictive value with respect to the onset of death in long-term observation of patients with coronary heart disease, type 2 diabetes, ischemic stroke, hypertension, and in patients with chronic renal failure [4]. Objective of the study: to evaluate the interrelation between circulating OPG and coronary vasculature damage in type 2 diabetes mellitus (T2DM) patients with documented coronary artery disease.

Materials and Methods. 167 subjects with T2DM with previously documented Coronary Artery Disease were enrolled to the study. Osteoprotegerin levels were measured by ELISA technique (Bender Med Systems GmbH, Austria). Concentrations of total and HDL cholesterol were determined and obtained with "AU640 Analyzer" (Olympus Diagnostic Systems Group, Japan).

Statistical analysis was performed in SPSS for Windows v. 17.0 (SPSS Inc., Chicago, Il, USA). All values were given as mean and 95% CI or median and percentiles. An independent group t-test was used for comparisons for all interval parameters meeting the criteria of normality and homogeneity of variance. For interval parameters not meeting these criteria, the non-paramentric Mann-Whitney test was used to make comparisons between groups. Comparisons of categorical variables between groups were performed using the Chi^2 test, and the Fisher exact test. Receiver operating

characteristic (ROC) curves were configured to establish cutoff points of OPG level that optimally predicted coronary atherosclerosis. A calculated difference of P<0.05 was considered significant.

Results. Circulating OPG level in subjects with high risk was significantly higher when compared to low patients with low risk (5345.26 pg/mL [95% confidence interval (CI) = 4456.90-5824.82 pg/mL] and 2210.93 pg/mL; 95% CI = 1751.23-2823.45 pg/mL; P<0.001).). Comparison of the predictive value of OPG concentration to the severity of coronary atherosclerosis in patients at low and high risk was performed using ROC-analysis. The findings suggest that the predictive power of the model for high-risk patients, the estimated largest AUC (area under curve), somewhat higher than for patients with relatively low risk (AUC = 0,956; sensitivity = 84.5%; specificity = 87.8% and AUC = 0,776; sensitivity = 77.2%; specificity = 76.9% respectively). In this case, the cutoff point for the concentration of OPG, have the best prognostic potential on the risk of coronary atherosclerosis, were for both groups of patients, 4467.2 pg / ml and 3168.9 pg / ml respectively. In conclusion, we believe that elevated OPG in plasma can be considered as independent predictor of severity of coronary vasculature damage in type 2 diabetic patients.

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Key words: *Type two diabetes mellitus; Osteoprotegerin; Cardiovascular events; Coronary artery disease.*

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CILIARY NEUROTROPHIC FACTOR IN PATIENTS WITH PEDIATRIC ISCHEMIC STROKE

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Ciliary neurotrophic factor (CNTF) represents an important biomarker in many neurological diseases, including ischemic stroke in the child, being a significant factor in the survival of neurons and oligodendrocytes, mediates neurogenesis and anti-inflammatory processes. Aim: Assessment of the role of CNTF in the ischemic stroke in children by assessment of the serum levels of this biomarker.

Materials and Methods: The serum levels of CNTF were determined in 52 children aged from 4 weeks to 10 years with ischemic stroke using samples of the blood serum in the first 3-5 days after admission. The diagnosis of ischemic stroke was confirmed based on clinical manifestations and imaging examinations. CNTF was also determined in 30 practically healthy children.

Results: We revealed elevated CNTF serum levels in children who supported ischemic stroke, i. e., mean CNTF value was 7.9 pg/ml, compared to practically healthy children,