ISIC-2022 International Scientific Interdisciplinary Conference

Koteliukh Mariia, Dvorechenets Danylo, Marchenko Iryna

IMMUNOLOGICAL ASPECTS OF ACUTE MYOCARDIAL INFARCTION IN PATIENTS WITH TYPE 2 DIABETES AND OBESITY

Kharkiv National Medical University
Department of Internal Medicine No. 2, Clinical Immunology and Allergology named after academician L.T. Malaya
Kharkiv, Ukraine
Scientific advisor: prof. Kravchun Pavlo Hryhorovych

Introduction. Acute myocardial infarction (AMI) and obesity are common diseases among diabetic patients. The immunological mechanisms of the development of AMI in diabetic patients with excessive body weight is an insufficiently studied area and needs careful consideration.

The purpose of the study – to determine immunological markers of the development of AMI in patients with diabetes mellitus type 2 and obesity.

Methods. The study examined 31 patients with AMI, type 2 diabetes and obesity. The control group consisted of 20 practically healthy people. It was determined by the immunoenzymatic method adropin and Human Fatty acid Binding Protein 4 (FABP 4) with the use of a set of reagents «Human adropin», «FABP 4» (Elabscience Biotechnology, USA) and «C1q/TNF-related protein (CTRP 3)» (Aviscera Bioscience Inc, Santa Clara, USA) according to the indicated instructions for conducting the analysis. Statistical data processing was carried out with the help of a license package of programs “IBM SPPS Statistics 27.0”. The hypothesis about the normality of the distribution of indicators was carried out according to the Shapiro-Wilk test. Non-parametric methods were used according to the sample size and distribution of values. Interrelationships of indicators were analyzed using the correlation coefficient Spearman (r). The difference was considered reliable at values of $p<0.05$.

Results. It was determined that the level of adropin in patients with AMI, type 2 diabetes and obesity was reduced and amounted to 14.10 (8.23; 17.90) pg/ml compared to the control group of 23.58 (20.86; 26.29) pg /ml ($p<0.001$). The concentration of FABP 4 was increased in patients and amounted to 9.60 (8.73; 11.94) ng/ml compared to the control group - 4.25 (3.46; 6.16) ng/ml ($p<0.001$). The CTRP 3 content was reduced and was 193.44 (166.48, 250.11) ng/ml compared to the control group 315.85 (287.06, 371.02) ng/ml ($p<0.001$). In patients was found an inverse correlation between adropin and total cholesterol ($r = -0.575$, $p < 0.001$), low density lipoproteins

(r = -0.485, p = 0.006), high density lipoproteins (r = -0.394, p = 0.028); between FABP 4 and total cholesterol (r = 0.363, p=0.04), triglycerides (r = 0.493, p=0.006); between CTRP 3 and triglycerides (r = -0.501, p=0.005), coefficient of atherogenicity (r = -0.366, p = 0.04).

Conclusion. It has been established that in patients with AMI, type 2 diabetes and obesity, there is a relationship between markers of energy, adipokine and lipid metabolism.

Kovalenko Anastasia, Bazylieva Yuliia, Orlova Maria

EFFECTIVENESS OF THE COMBINATION OF ACE INHIBITORS AND INDAPAMIDE IN THE TREATMENT OF ARTERIAL HYPERTENSION

Kharkiv National Medical University
Department of Internal Medicine №1
Kharkiv, Ukraine
Scientific advisor: docent Galina Panchenko

Topicality. Today, according to the recommendations of the European Society of Cardiologists for the diagnosis and treatment of heart failure (CH) (2021), ACE inhibitors (ACEI) are first-line drugs that should be taken on a permanent basis by patients with arterial hypertension (AH), coronary heart disease (CHD) and heart failure (HF). ACE inhibitors are recommended for all patients with hypertension, except for patients with intolerance or contraindications. First of all, this is due to the fact that ACE inhibitors perform a powerful hypotensive effect with pronounced organoprotective properties, namely, they are cardio-, nephro- and angioprotectors, which helps to reduce the frequency of complications and mortality.

It should be said that the most convincing evidence base is collected in the combination of ACE inhibitors with thiazide-like diuretics. When these groups of drugs interact, the hypotensive effect is enhanced. Diuretics dilate blood vessels by stimulating the synthesis of prostacyclin in the endothelium and prostaglandin E2 in the kidneys, and inhibitors, in turn, block the mechanisms of blood pressure increase by blocking the synthesis of angiotensin II. One of the most popular combinations in cardiology is the combination of Perindopril and Indapamide.