NEW METHOD OF HEART FAILURE DIAGNOSTIC IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION WITH COMORBIDANT OBESITY BACKGROUND BY INSULIN-LIKE GROWTH FACTOR-1

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Goal: improving the diagnosis of the development of acute heart failure in patients with acute myocardial infarction against obesity.

Materials and methods: the study involved 60 patients with AMI and OB (47% of women and 53% of men). The mean age was 64.14 ± 3.52 years. Patients were divided into groups according to the presence of complications of AMI - HF. The first group included patients with AMI with concomitant coolant with the presence of HF (n = 32). The second group included patients with AMI and coolant without HF (n = 28). HF was rated Killip. In patients with class I HF for Killip was noted in 19%, II - in 37%, III - in 43%, IV - 1%. Diagnosis of the development of HF in patients with AMI on the background of obesity is performed according to the level of IGF-1, which is determined by the enzyme immunoassay using a set of reagents "Insulin-like growth factor-I" (commercial tests MEDIAGNOST, Germany). Blood sampling was performed during the first day of the disease. Statistical processing of the obtained data was performed using the statistical program package "STATISTICA 7.0". Data are presented as mean values and mean error. The statistical significance of the different averages was determined by the F-Fisher test. Relationship analysis was performed using the Spearman correlation (r).

Results: in patients with complicated of AMI in the presence of OB who was included in the first group, a significantly lower level of IGF-1 by 29.75% (111,54 ±21,23 ng/ml and 158,13 ± 27,82 ng/ml, p<0,01) was found compared to patients in the second group presented with patients with AMI and OB without complications. A correlation was used to assess the presence and nature of the relationship between IGF-1 and HF. The inverse correlation between IGF-1 and HF was obtained r = -0.44, p <0.05. That is, the reduction of IGF-1 was accompanied by the development of HF in patients with AMI and OB.

Conclusions: the presence of acute myocardial infarction, complicated by the development of heart failure in patients with obesity, was associated with low levels of insulin-like growth factor-1 compared with patients without complications. Determination of insulin-like growth factor-1 in the serum of patients with acute myocardial infarction and obesity has shown increased efficacy, which makes it possible to use it as a marker of prognosis and severity of heart failure in this group of patients.