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Pregnancy associated plasma protein A an insulin-like growth factor-1 in acute coronary pathology

Authors:
G Kayumova¹, V Razin¹, ¹Ulyanovsk State University - Ulyanovsk - Russian Federation,

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Introduction. Worldwide deaths from cardio-vascular disease ranks first among all causes of overall mortality. The study of new markers of growth of atherosclerotic plaque and damage opens up new opportunities to reduce acute coronary death.

The purpose of the comparative analysis of levels of PAPP-A and IGF-I in the blood plasma in patients with acute coronary syndrome.

Material and methods. The study included 71 patients with acute coronary artery disease, the average age of 57 years. The plasma was determined PAPP-A and IGF-I. The blood sampling was performed at admission. The control group of 20 healthy individuals. A comparison group of 40 patients with hypertension and coronary heart disease with stable forms.

Results. PAPP-A infarction acute phase STEMI was the highest 27.75±11.75 and close to the mortality rate for 27.7±7.1. PAPP-A infarction acute phase non STEMI were slightly below 22.12±7.69, but very significantly higher (p<0.05) than in patients with unstable angina 8.22±3,16. Increased IGF-I in all cases of myocardial infarction. Nevertheless, compared with PAPP-A, IGF-I infarction acute phase STEMI was 156.53±45.31 lower than infarction acute phase non STEMI 172.28±31.59 and unstable angina. The highest concentration of IGF-I unstable angina 179.68±44.09. The negative correlation between IGF-I and PAPP-A in the case of death from acute coronary insufficiency - the concentration of IGF-I is the lowest 126.06±15.12, while the levels of PAPP-A the highest.

Conclusion. The levels of PAPP-A, IGF-I was significantly higher in patients with acute coronary artery disease compared with healthy people and patients with hypertension and coronary heart disease (stable form). PAPP-A and IGF-I are presented as growth factors and damage to protein, and can be used as an analyzer of an atherosclerotic plaque instability of acute coronary events.