

DIAGNOSTIC VALUE OF BIOMARKERS OF ACUTE MYOCARDIAL INFARCTION

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Great progress has been made in cardiology due to the development of fairly simple, highly sensitive and specific markers of myocardial damage. First of all, they include cardiotroponins (cTnT and cTnI) brain natriuretic peptide (BNP and NTproBNP), cardiac protein binding free fatty acids (H-FABP), and also markers of the risk of urgent conditions in cardiology.

The aim of the work is to analyze the diagnostic value of biomarkers of acute myocardial infarction (AMI) in determining the ratio of 2 characteristics - sensitivity and specificity. The basic ideas about biochemical markers in cardiology are obtained from the results of scientific works, foreign reviews and monographs.

In a comparative aspect, the sensitivity and specificity of myoglobin, CK, CK-MB, TnT and TnI in the diagnosis of AMI 3, 6 and 12 hours after the development of the disease were investigated. It was found that the sensitivity indices in troponins after 3 hours were approximately the same (on average 51-54%) and favorably differed from the corresponding data in both CK (31%) and to a lesser extent in CK-MBmass (46%).

The highest sensitivity to the 3rd hour was myoglobin – 69%. After 6 hours from the onset of myocardial infarction, the sensitivity of TnT was 78%, TnI – 81%, by 12 hours – 100% in both cases. At the same time, the sensitivity index of the SC by 12 hours did not exceed 88%. The specificity among the biomarkers studied was the highest in troponins and the lowest in myoglobin. The ratio of sensitivity and specificity in troponins approximately corresponded to that of CK-MB.

Thus, for the diagnosis of AMI it is recommended to use a double test with mandatory determination of the dynamics of cardiomarkers. It is advisable to repeatedly study myoglobin after the attack as a sensitive early marker with a high prognostic value of the negative result and a longer one-day study of troponins.

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