UDC 61

DIAGNOSTIC VALUE OF TROPONIN T IN PATIENTS WITH MULTIPLE ORGAN FAILURE SYNDROME

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Summary. The study included 122 patients [75 men, 47 women aged 42 to 76 years, mean 59 ± 10,3 years] hospitalized in ITD. Cardio specific tropin T in blood of patients indicates myocardial involvement in the pathological process.

Keywords: research; Tropin T; acute myocardial infarction; inflammatory process.

Introduction

According to WHO, the diagnosis of acute myocardial infarction (AMI) based on 2 from 3 major criteria – changes on the ECG, a typical clinical picture, increased markers of myocardial necrosis [1; 2].

In 2000, the European Cardiac Research Society and American College of Cardiology was included correction in the definition of AMI, according to which the principal diagnosis of AMI is in detection of elevated levels of a highly specific markers of myocardial necrosis – cardiac troponin in the blood [1; 3]. The widespread use of tests for cardiac troponin significantly increased the detection of acute myocardial infarction [4; 6].

Until recently it was thought that troponins enter into the blood only as a result of the cardiomyocytes death [5]. However, this provision in recent years is challenged. Increased troponin can be not only in AMI, but also in conditions, accompanied by hyper production of inflammatory cytokines. In this case incorrectly diagnosis of AMI can be diagnosed.

The aim of this study was investigation of the diagnostic value of increasing of cardiac troponin T levels in patients without clinical and ECG changes in typical AMI.

Materials and methods. The study included 122 patients [75 men, 47 women aged 42 to 76 years, an average 59 ± 10,3 years] who were hospitalized in the Intensive Care Unit of Medical Center of Semey State Medical University. All patients underwent general clinical examination. The level of cardiac troponin in the blood [using the Cardiac Reader Roche device, Germany] was determined at admission, or at the time of deterioration. ECG performed on admission and daily. The final diagnosis is established on the basis of analysis of the clinical picture, study the dynamics of the main symptoms, these comprehensive survey.

Results and discussion. Among the 122 patients tested for troponin T on the severity of the conditions and manifestations of multiple organ failure was positive in 72 patients [59 %].

In 6 patients were diagnosed AMI, which was based of the typical dynamic of the ECG, progressive left ventricular failure, identify areas of hypokinesia at echocardiography.

In 3 patients with AMI proceeded against the background of decompensate diabetes. In 4 patients, AMI was repeated. Two of six patients with AMI died and the diagnosis of AMI confirmed at autopsy. The remaining 66 patients the diagnosis of AMI was not confirmed, they have found other disease manifestations of multiple organ failure: a 19 – acute intestinal obstruction, 23 – is a widespread peritonitis, 12 – hemorrhagic pancreatic necrosis, in 12 – severe closed head injury with brain contusion.

It should be noted that the level of troponin T in patients with acute myocardial infarction and other diseases did not differ. In the other group (50 patients), where is not detected T – troponin, despite the severity of the patient's condition after intensive care has stabilized. This fact should be regarded as hyperdiagnosis of conditions such as myocardial infarction and conditions assessed as multiple organ failure.

Thus, our results confirm that the level of cardiac troponin T can be elevated not only in AMI, but also in other diseases involving multiple organ failure, which

corresponds to other scientists [7; 8]. Increased troponin T in patients without AMI, presumably due to myocardial damage as a result of the systemic inflammatory response. In this connection, it can be assumed that an increase in cardiac troponin levels in patients with multiple organ failure is not a false positive, and indicates the severity of the process involving the myocardium in the pathological process.

Based on the above, detection in the blood cardio specific troponin T in patients in critical condition, with no other manifestations of acute myocardial infarction, indicates of myocardial involvement in the pathological process, that may be a manifestation of multiple organ failure with systemic inflammatory response.

Conclusions

1. Identification of blood cardio specific troponin T in patients suggests the involvement of the myocardium in the disease process.

2. Cardio specific troponin T is found not only in patients with acute myocardial infarction, but also in patients with systemic inflammatory response.

3. The probability of detection cardiotroponin T in the blood of patients as higher as expression of intoxication syndrome.

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