

Chapter 7

CARDIAC TROPONINS IN THE DIAGNOSIS OF ACUTE CORONARY SYNDROME

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Acute coronary syndrome (ACS), clinical spectrum, includes patients with unstable angina (UA), non-ST-elevation myocardial infarction (NSTEMI), or ST-elevation myocardial infarction (STEMI). The clinical spectrum of ACS is wide. In spite of the fact that, in the last four decades a reduction in death due to coronary heart disease (CHD), ACS remains the leading cause of death in people over the age of 35.^(1,2)

In the pathophysiology of ACS, the basic component is decreased blood-stream to a zone of the cardiac muscle, more often than not auxiliary to plaque rupture and thrombus arrangement.⁽²⁾ Although atherothrombotic vascular disease is the main cause in the majority of patients with ACS, some of the patients may develop ACS without obstructive coronary disease.^(2,3) The causes of the non-obstructive acute coronary syndrome include spontaneous coronary dissection, coronary embolism, prolonged severe vasospasm, and stress-induced cardiomyopathy.⁽³⁾

The pharmacologic treatment of ACS can be broken down into several groups of medications that improve survival, decrease recurrent ischemic events, and provide symptomatic relief. Choosing an adequate treatment modality in ACS involves several critical decisions. It is essential to distinguish STEMI patients from those who are experiencing NSTEMI or UA. This distinction further impacts the priorities, timing, and selection of pharmacotherapy used in different patients with ACS.⁽⁴⁾

The first stage of evaluation in the patient is an electrocardiogram (ECG) to distinguish STEMI and non-STEMI, unstable angina. In the case of STEMI, the patient should have an emergency angiography for primary percutan coronary intervention.⁽²⁾ The basis for UA and NSTEMI differentiation is the presence of biomarkers of myocardial damage (cardiac-specific troponins) in the blood sample of patients. STEMI refers to acute coronary syndrome accompa-

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