

Acute coronary syndrome associated with occlusion of the main trunk of the left coronary artery in patients with a previously negative exercise stress test

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Objective. A case report of a patient with acute coronary syndrome with occlusion of the left main coronary artery with a typical clinical picture and a negative exercise stress test result.

Case report. A 44-year-old patient is presented to our service as STEMI with elevation in the inferior leads and ST depression in the precordial leads. After intrahospital cardiac arrest and resuscitation, primary PCI of left main coronary artery is performed, after which hemodynamic stabilization occurs. Retrospective review of medical history reveals that he was evaluated three years before the acute event due to occasional chest pain. The pretest probability for coronary heart disease was 38%, so in accordance with the then valid ESC guidelines for stable coronary heart disease, a stress ECG test was performed, which was assessed as negative for significant coronary heart disease. All analyzed test parameters indicated a low risk of adverse cardiovascular events: functional capacity, ST segment denivelation, chronotropic competence, blood pressure variations, Duke treadmill score. With a posttest probability of 9%, the patient was not further evaluated for coronary heart disease and was asymptomatic for the next three years and did not respond to follow-up examinations. If he presented himself after 2019 according to the newer ESC guidelines for chronic coronary syndromes, the patient would be indicated to perform a functional imaging test or CT coronary angiography at the time of the initial clinical evaluation.

Conclusion. The diagnostic algorithm for patients with chest pain is based on a pretest probability that determines further diagnostic workup. Patients with a negative exercise test and a typical clinical presentation should be referred for further diagnostic imaging test because of the risk that a small number of them may have significant and even critical coronary stenosis.

Key words: pretest probability, coronary artery disease, CAD, ECG stress test, cardiovascular adverse events