

BRIEF REPORT

One-month Outcome of Acute Coronary Syndrome Patients with Positive Creatine Kinase-MB and Negative Troponin; a Brief Report

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Abstract

Introduction: Biochemical markers of myocardial injuries have radical importance in diagnosis or dismissing cardiac events, especially in cases that electrocardiographic findings are not present. Therefore, this study was designed aiming to appraise 1-month outcome of patients presenting to emergency department (ED) following acute coronary syndrome (ACS) with positive creatine kinase-MB (CK-MB) and negative troponin.

Methods: This prospective cross-sectional study was done on patients presenting to ED with complaint of acute chest pain and diagnosis of ACS. Patients who did not have a clear electrocardiographic finding indicating acute myocardial infarction (MI) (ST segment elevation) and had positive CK-MB and negative troponin in laboratory tests of serum were included. Demographic data and baseline characteristics, CK serum level, CK-MB, troponin, and 30-day outcome of the patients were analyzed using SPSS version 19.

Results: 13759 patients had visited the ED with complaint of chest pain during the study period (57% female). 1003 (7.3%) patients had positive troponin test and 12704 (92.3%) had negative CK-MB index and were therefore eliminated from the study. Finally, 52 (0.4%) had both positive CK-MB and negative troponin indices. 35 (67.3%) of them were discharged from ED after serial electrocardiography and negative troponin test. 11 (21.2%) were admitted to critical care unit but were discharged due to having 2 negative troponin tests in 12 hours and normal serial electrocardiogram. 6 (11.5%) were referred for surgical interventions. No mortality was seen in 1-month follow-up. **Conclusion:** Based on the results of the present study, only 0.4% of ACS patients presenting to the studied ED had positive CK-MB and negative troponin indices. During 1-month follow-up, no case of mortality or MI was observed among them. Only 2 (3.8%) cases needed surgical intervention.

Key words: Chest pain; troponin; acute coronary syndrome; biomarkers
