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## Value of copeptin as a novel biomarker in the diagnosis of acute myocardial infarction

**Mohamed Helal**

National Heart Institute, Egypt

**Objective:** To detect the diagnostic value of copeptin as a novel biomarker in early diagnosis of acute myocardial infarction.

**Background:** Copeptin is a strong marker for mortality and morbidity in patients with heart failure after an acute myocardial infarction (AMI). It is released very early during the onset of an AMI, raising the question of its potential value in the diagnosis of AMI and particularly in ruling-out AMI. Indeed, copeptin is released much earlier than troponin making the interpretation of their complementary kinetics a useful tool to rule-out AMI.

**Method:** This Prospective Comparative Analytical cohort study included 56 patients with Patients with acute myocardial infarction (STEMI) and 15 healthy controls who are admitted to the Cardiology and Clinical Pathology Departments, Menofya University from January 2014 to December 2014. All patients were subjected to full medical history taking, general examination, local cardiac examination, resting 12 leads EEG and laboratory investigations (including CK-T and copeptin).

**Results:** Our study showed non-significant differences regarding age, sex, blood pressure, hypertension and dyslipidemia between patient group and control group, but there was statistically a significant difference as regards heart rate, smoking, diabetes mellitus, CK-T and copeptin.

**Conclusion:** Adding copeptin to cardiac troponin T (cTnT) allowed safe rule out of AMI with a negative predictive value (NPV) >99% in patients presenting with suspected acute coronary syndromes. This combination has the potential to rule out AMI in 58% of patients without serial blood draws.

hilal49@yahoo.com

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