Presepsin (SCD14-ST): Could it be a novel marker for ST-elevation myocardial infarction?

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Background: Acute myocardial infarction (AMI) could be considered to be a state of inflammation. Many inflammatory markers have been evaluated during AMI setting so far. Presepsin (PSP) is a novel biomarker for diagnosis and prognosis of systemic inflammation that have not been studied in AMI setting up to date. In this study, we aimed to examine serum PSP levels in patients with acute ST elevation myocardial infarction (STEMI).

Patients and Methods: 48 patients with STEMI and fifty healthy controls without coronary artery disease, verified by coronary angiography, were included in the study. Together with routine laboratory tests needed for STEMI, plasma concentrations of PSP were measured in peripheral venous blood samples of the participants.

Results: Plasma PSP and troponin levels were significantly higher in patients with STEMI than controls (1988.89±3101.55 vs 914.22±911.35 pg/mL, p=0.001 and 3.46±3.39 vs 0.08±0.43 ng/mL, p=0.001, respectively). Cut-off value for PSP was found 447 pg/ml to detect STEMI with 87.5% sensitivity, 44% specificity, 60% positive predictive value and 78.5% negative predictive value.

Conclusions: In this study, PSP levels were found significantly elevated in patients with STEMI together with high sensitive troponins. PSP may be a new marker for AMI detection. Large scale studies are needed to reveal the importance of PSP in the diagnosis of AMI.

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