Relationship between serum level of high-sensitive C-reactive protein and extension of myocardial involvement in patients with acute myocardial infarction.

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Abstract
INTRODUCTION:
The high-sensitive C-reactive protein (HS-CRP) assay is being increasingly used as a marker for cardiac risk assessment and as a prognostic tool in heart disease. In current study, we assessed the relationship between serum level of HS-CRP and extension of myocardial involvement in acute myocardial infarction.

METHODS:
In a Cross-Sectional study, 50 patients with the final diagnosis of acute myocardial infarction and admitted for the first time in CCU wards of the Kerman University in 2010 were studied. Serum HS-CRP and Troponin I level was measured using commercial ELISA kits, 24 hours after the appearance of first manifestations. All patients underwent 2-dimensional echocardiography for assessing the number and severity of involved segments as well as wall motion abnormality.

RESULTS:
There was a strong positive correlation between the serum level of HS-CRP and serum Troponin I level (beta = 0.509, p < 0.001). Multivariable linear regression showed that the level of HS-CRP could strongly predict serum level of Troponin I within the first 24 hours of MI appearance (Beta = 0.308, Standard Error = 0.080, p < 0.001). But, no significant relationships were revealed between the mean serum HS-CRP level and the location of myocardial infarction, the number of involved segments, left ventricular ejection fraction, and ST-segment elevation score.

CONCLUSION:
For a strong correlation between HS-CRP and Troponin I, HS-CRP can be a useful biomarker for predicting extended myocardial involvement in patients with acute myocardial infarction.

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