

# The predictive role of early C-reactive protein values for long-term mortality among patients with acute coronary syndrome

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**Introduction:** The role of inflammation is known in genesis of atherosclerosis and consequently atherosclerotic cardiovascular disease (ASCVD) events. Data from previous research exposed significant relation between elevated plasma level of C-reactive protein (CRP) and prevalence of underlying atherosclerosis as well as risk of recurrent adverse cardiovascular events among patients with established ASCVD. Furthermore, some studies showed connection between increased plasma concentration of other inflammatory markers like fibrinogen, IL-1 $\beta$ , SDF-1 $\alpha$  and cardiovascular ischemic events.<sup>1,2</sup> The primary aim of this study is to examine relation of early CRP values and all-cause mortality among patients with acute coronary syndrome (ACS).

**Patients and Methods:** This single-center registry-based prospective research included 2536 patients with acute coronary syndrome who were hospitalized between January 2017 and December 2023 and had long-term follow up. Early CRP values were evaluated at admission to the hospital. The primary composite end point was all-cause mortality, contained of cardiovascular and non-cardiovascular mortality. Secondary analyzed outcome was reinfarction. All the participants were exposed to percutaneous coronary intervention. Patients with proven infection were excluded.

**Results:** A total of 462 patients (18.2%) died during the long-term follow up. Early CRP values were measured among 409 of them (88.5%); 289 (70.7%) of whom died due to cardiovascular death and 134 (29.3%) of whom died due to non-cardiovascular death. This study showed no significant difference in observed values of CRP between mortality groups (7.2 vs 7.0,  $p=0.825$ ).

**Conclusion:** While some previous studies showed significant difference for risk-prediction following ACS due to early measured CRP values, this observational study showed no significant difference in observed CRP values between mortality groups. Furthermore, there are other inflammatory markers which should be measured at the admission to the hospital and compared among tested groups.

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## LITERATURE

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