C-REACTIVE PROTEIN AS A RISK FACTOR FOR FUTURE CARDIOVASCULAR EVENTS IN PATIENTS WITH STEMI AND NORMAL OR MILDLY IMPAIRED LEFT VENTRICLE SYSTOLIC FUNCTION

Poster Contributions
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Background: Myocardial infarction with ST segment elevation (STEMI) is associated with significant increase in morbidity and mortality. We evaluated the association of C-reactive protein (CRP) and cardiac troponin I (cTnI) with the prognosis of patients presented with STEMI.

Methods: In this study 235 (36 female) consecutive subjects (mean age 60±13 years) presenting in our department with STEMI were recruited and they were follow-up for one year. At presentation, CRP, cTnI, left ventricle ejection fraction (EF) and basic demographic characteristic were recorded. The primary end point was defined as cardiovascular death, readmission to hospital with heart failure, and new acute coronary syndrome.

Results: During the follow-up period the primary end point occurred in 53 subjects (23%). The subjects who present the primary end point had significant increased values of logcTnI (p=0.008), logCRP (p=0.008) and decreased left ventricle EF (p<0.001), compared to subjects free of cardiovascular events. Cox regression analysis was applied in total population after incorporating potential confounders such as age, EF, CRP and cTnI levels, smoking habits and the presence of diabetes mellitus and hypertension. The analysis revealed that for every 10% decrease in the EF there is a 2-fold increase in the relative risk to present the primary end point (HR=2.06 95%CI 1.50 to 2.80, p<0.001), while CRP was not a significant predictor. Nevertheless, in the cohort of patients with EF≥40% the same analysis after adjustment for the aforementioned confounders revealed that the only predictor of future events was CRP levels at presentation. Interestingly for every 10 mgr/dl increase in the CRP serum levels there is a 10% anticipate increase in the risk of future cardiovascular events (HR= 1.10 95CI 1.001 to 1.21, p=0.047).

Conclusion: These findings confirm the important role of EF in the prognosis of patients with STEMI. Importantly, they highlight the significant prognostic role of CRP in the low risk cohort of patients with normal or mildly impaired left ventricle function.