Mild to Moderate Heart Failure on Admission Predicts One Month Mortality in St-Elevation Acute Coronary Syndrome Treated by Primary Percutaneous Coronary Intervention

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BACKGROUND: Admission heart failure (HF) is a powerful predictor of prognosis in ST-elevation acute coronary syndrome (STE-ACS). AIM: To evaluate the short-term outcomes of mild to moderate HF patients with STE-ACS treated by primary percutaneous coronary intervention (PPCI) in contemporary era. METHODS: 1208 patients undergoing PPCI for STE-ACS were studied. HF was defined as Killip class 2 or 3 on admission. Cardiogenic shock was excluded. RESULTS: 157 patients admitted with HF (13.0%). They were older ($p<0.0001$), more females ($p<0.03$), less smokers ($p<0.04$) and had more frequently multivessel disease ($p<0.008$), more decreased left ventricular function (LVEF<40%)(<0.001), larger enzymatic infarct size ($p<0.001$), and renal dysfunction ($p<0.0006$). "No-reflow" phenomenon was observed more frequently in HF patients (10.0 % vs 5.1%, $p<0.05$). No difference was observed between two groups in terms of time to admission, preprocedural TIMI 0-1 flow, collateral circulation, post-procedural TIMI 3 flow. GP IIb /IIIa antagonists were used in 70% of all patients. Unadjusted mortality rate for 30d was 2.3 % for Killip 1, 3.4% for Killip 2 and 18.4% for Killip 3 patients ($p<0.0003$). At multivariate analysis renal failure (OR 1.28, 95% CI 1.05-1.82, $p<0.01$), multivessel disease (OR 2.35, 95% CI 1.37-4.04, $p<0.001$), LVEF <40% (OR 1.49, 95% CI 1.16- 1.92, $p<0.001$) and Killip class (OR 1.77, 95% CI 1.05-2.98, $p<0.02$) were found to be independent predictors of 30d mortality rate. CONCLUSION: Mild to moderate HF on admission (Killip class 2 and 3) remains independent predictor of 30d mortality in STE-ACS.