

Predictors of Mortality in Patients with STEMI Presenting with Cardiogenic Shock

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Background: Cardiogenic shock complicating acute STEMI is a serious disease associated with a high death rate. A number of studies have identified risk factors for mortality in patients (pts) presenting with cardiogenic shock complicating myocardial infarction.

Aim: To assess the outcome of pts presenting with STEMI and cardiogenic shock concomitantly with diabetes mellitus [DM] and / or renal failure [RF] and evaluate whether presence of both portend a synergistic risk. Methods: We employed Rabin Medical Centers' primary PCI registry, which includes all pts with STEMI who underwent primary PCI between 2001 and 2010. We identified 161 pts who presented with cardiogenic shock and underwent primary PCI. Only 147 pts had GFR measurement before PCI and they were allocated into 4 groups: group1: with DM and RF(n=25), group 2:with DM without RF(n=18), group 3:with RF without DM(n=42), group 4: without DM or RF(n=62). One month mortality was assessed.

Results: In a univariate analysis model statistically significant differences between the groups were observed in the following factors: age, RF, DM, prior MI , glycoprotein IIb/IIIa use. In a multivariate analysis model, factors which were associated with one month mortality were: DM (OR=3.2, CI 1.3-7.8, P=0.01), GFR<60 ml/min/m² (OR=1.8, CI 1.3-2.4, P=0.00006), the rest did not exhibit statistical significance. Mortality rate in group 1 was 84%, in group 2 was 50%, in group 3 was 69%, in group 4 was 21%.

Conclusion: Prognosis of patients presenting with STEMI and cardiogenic shock is dismal, Presence of both DM and RF is associated with a greater one month mortality than each one alone. Their absence was associated with a much better outcome. These prognostic markers may be useful for risk-stratification and for patient selection for investigational therapies.