EP6_162

Impact of Baseline Serum Albumin on Renal Function in Patients with ST-Segment Myocardial Infarction Treated with Primary Percutaneous Coronary Intervention

Robert Zukermann, Yulia Sheinfeld, Sirouch Petcherski, Eitan Abergel, Michael Kapeliovich, Ariel Roguin, Arthur Kerner, Haim Hammerman, Rafael Beyar, Eugenia Nikolsky
Cardiology, Rambam Medical Center, Israel

Background:
Worsening renal function after percutaneous coronary intervention (PCI) is associated with adverse outcomes. We assessed relationship between baseline serum albumin level and change in renal function in patients (pts) undergoing primary PCI for ST-segment elevation myocardial infarction (STEMI).

Methods:
Based on the prospectively collected data, we analyzed change in serum creatinine (SCr) level at 48 to 72 hours post primary PCI compared with baseline value in 553 consecutive pts (mean age 60.3, males 81.7%, diabetes 19.7%) with STEMI treated from January 2007 to April 2012. Outcomes were stratified by tertiles of baseline albumin level.

Results:
Pts in the lower and in the upper tertiles of baseline albumin compared with pts in the middle tertile, had significantly higher rates of renal function deterioration after primary PCI (Table). By multivariable analysis, adjusted for age, diabetes, hypertension, creatinine clearance, and volume of contrast medium, SCr increase ≥25% or ≥0.5 mg/dl was independently predicted by lower albumin (odds ratio for lower vs. middle tertile 0.33; 95% CI: 0.11-0.99; p=0.049) and by higher albumin (odds ratio for upper vs. middle tertile 2.86, 95% CI: 1.21-6.77; p=0.017).

Conclusion:
In this analysis, there was a nonlinear relationship between baseline serum albumin level and worsening of renal function in pts with STEMI undergoing primary PCI. Both lower and higher levels of albumin were associated with renal function deterioration.

End points, n (%)	Baseline serum albumin (g/dL)			P-value
	≤3.3 n=201 pts	3.4-3.6 n=174 pts	≥3.7 n=178 pts	
SCr increase ≥25%	32 (15.9)	14 (8.1)	33 (18.5)	0.014
SCr increase ≥0.3 mg/dl	17 (8.5)	11 (6.3)	21 (11.8)	0.19
SCr increase ≥0.5 mg/dl	9 (4.5)	4 (2.3)	8 (4.5)	0.46
SCr increase ≥25% or ≥0.3 mg/dl	33 (16.4)	16 (9.2)	34 (19.1)	0.027
SCr increase ≥25% or ≥0.5 mg/dl	32 (15.9)	14 (8.1)	33 (18.5)	0.014