

Acute Coronary Syndromes

PROGNOSTIC IMPACT OF RED BLOOD CELL TRANSFUSION IN PATIENTS UNDERGOING PRIMARY ANGIOPLASTY FOR STEMI

Poster Contributions

Poster Sessions, Expo North

Sunday, March 10, 2013, 9:45 a.m.-10:30 a.m.

Session Title: Percutaneous Coronary Intervention for AMI: Predictors of Outcome

Abstract Category: 1. Acute Coronary Syndromes: Clinical

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Background: We sought to examine in-hospital and long-term outcomes of red blood cell (RBC) transfusions in patients undergoing primary percutaneous coronary intervention (PCI) for ST-segment elevation myocardial infarction (STEMI).

Methods: 2537 consecutive STEMI patients (mean age 56.2 ± 11.7 years, 2111 male, 426 female) undergoing primary angioplasty were retrospectively enrolled into the present study. Patients were categorized according to whether they received RBC transfusions during hospitalization. Clinical characteristics, in-hospital and long-term outcomes of primary PCI were analysed.

Results: Of consecutive 2537 patients, 88 (3.4%) received RBC transfusions during the index hospitalization. The transfused patients were older than non-transfused patients (mean age 63.6 ± 12.1 vs 56.2 ± 11.8 , $p < 0.001$). Compared to non-transfused patients; female gender and hypertension were more prevalent in transfused patients (45.4% vs 15.8%, $p < 0.001$; 52.3% vs 40.7%, $p = 0.04$, respectively). Baseline values of hematocrit and hemoglobin were lower in patients receiving transfusion (33 ± 6.2 % vs 40.2 ± 4.7 %, $p < 0.001$; 11.1 ± 2.3 mg/dl vs 13.7 ± 1.6 mg/dl, $p < 0.001$ respectively). The transfused patients had significantly higher in-hospital and long-term mortality (for in-hospital mortality: 10.2% vs 2.7 %, $p < 0.001$; for long-term mortality: 14.1% vs 5.1%, $p = 0.001$). By multivariate Cox regression analysis in all 2537 patients; RBC transfusion was found a powerful independent predictor of in-hospital cardiovascular mortality (odds ratio [OR] 8.31, $p < 0.001$).

Conclusions: These results suggest that RBC transfusion is associated with increased in-hospital and long-term mortality in patients with STEMI undergoing primary angioplasty.