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Acute Coronary Syndromes

THE CONSEQUENCES OF HEPARIN USE IN PRIMARY PERCUTANEOUS CORONARY INTERVENTION: INSIGHTS FROM THE BLUE CROSS BLUE SHIELD OF MICHIGAN CARDIOVASCULAR CONSORTIUM (BMC2)

Poster Contributions

Hall C

Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Acute Coronary Syndromes: Treatment Considerations

Abstract Category: 1. Acute Coronary Syndromes: Clinical

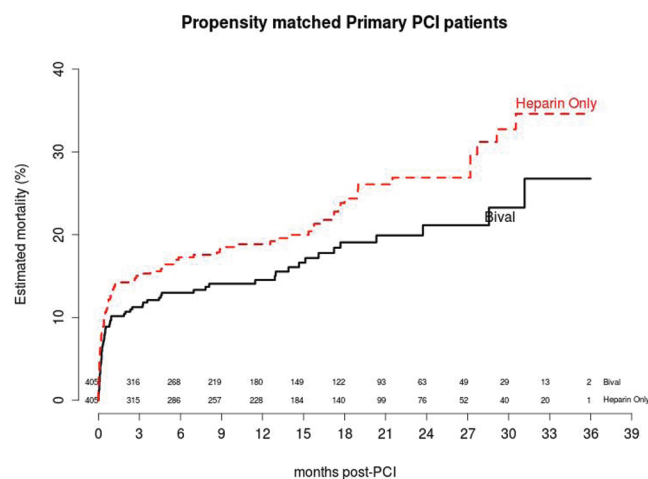
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Background: Heparin is commonly used as the sole procedural anticoagulant in patients undergoing primary PCI (PPCI). Use of Bivalirudin compared with platelet glycoprotein IIb/IIIa inhibitors (GPI) has been associated with improved survival in this cohort. There are no data on the comparative effectiveness of heparin versus bivalirudin in this population.

Methods: We compared the outcome of patients undergoing PPCI and treated with Bivalirudin versus Heparin only across 47 hospitals in Michigan between 2010 and 2012. Propensity score matching (PSM) on a 1:1 basis without replacement and multivariate logistic and Cox proportional hazards regression models were utilized to account for confounding.

Results: Of 4,035 admissions for PPCI included in the analysis, Bivalirudin was used in 2,059 (51%) and heparin in 1,976 (49%). 1,622 (82%) heparin patients were successfully matched to bivalirudin patients using PSM. After adjusting for baseline covariates, Heparin use was associated with significantly greater in-hospital mortality in the overall cohort (10.6% versus 4.5%, Adjusted OR = 1.85, 95% CI 1.36 - 2.52, $p < 0.001$) and after PSM (7.3% versus 4.6%, Adjusted OR = 1.91, 95% CI 1.33 - 2.73, $p < 0.001$). Heparin use was independently associated with higher long-term mortality (median follow up of 1 year, HR = 1.48, 95% CI 1.07 - 2.01, $p = .018$).



Conclusions: Heparin monotherapy in PPCI is associated with increased in-hospital and long term-mortality compared to Bivalirudin.