GPIIb/IIIa INHIBITORS USE IMPROVES OUTCOMES AFTER ASPIRATION THROMBECTOMY IN PATIENTS WITH ST ELEVATION MYOCARDIAL INFARCTION: A METAREGRESSION ANALYSIS

Poster Contributions
Poster Hall B1
Monday, March 16, 2015, 9:45 a.m.-10:30 a.m.

Session Title: Structural
Abstract Category: 28. TCT®ACC-i2: ACS/AMI/Hemodynamics and Pharmacology
Presentation Number: 2104-276

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Background: Randomized controlled trials (RCT) evaluating thrombus aspiration (TA) before primary percutaneous coronary intervention (PCI) vs primary PCI alone have shown a heterogeneous effect on 30 day mortality. We hypothesized that the use of GpIIb/IIIa inhibitors along with TA is associated with reduced distal embolization during primary PCI leading to improved 30-day mortality.

Methods: We performed comprehensive search for RCTs comparing concomitant TA with primary PCI vs primary PCI alone that reported 30-day mortality.

Results: Metaregression of 13 RCTs showed that studies with higher GpIIb/IIIa inhibitor use had higher mortality benefit with TA, compared with studies with lower GpIIb/IIIa inhibitor use (0.07 reduction in log-relative risk per 10% increase in GpIIb/IIIa inhibitor use, p=0.047, Figure). A second metaregression to evaluate the association between the prevalence of GpIIb/IIIa inhibitors use in the TA arm minus the prevalence of GpIIb/IIIa inhibitors use in control arm and all-cause mortality with use of TA showed that studies with higher proportion of GpIIb/IIIa inhibitors use in TA arm (than control arm in the same study) showed a higher mortality benefit with TA (0.09 reduction in log-relative risk for every percent higher GpIIb/IIIa inhibitors use in the TA arm, compared with the control arm, p=0.02).

Conclusion: Concomitant use of GpIIb/IIIa inhibitors appears to have a synergistic effect with TA on 30 day mortality and may explain some of the heterogeneity among the RCTs.