

Antiplatelet and New Anti-Thrombin Studies (Oral Contributions)
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Inter-Assay Variability in the Degree of Platelet Inhibition Following GPIIb/IIIa Receptor Blockade in Patients Undergoing Coronary Intervention: A Comparison of Three Different Point-of-Care Assays

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Background: The degree of platelet inhibition (PI) induced by GPIIb/IIIa antagonists has been shown to influence clinical outcomes following percutaneous coronary intervention (PCI). There is no comparative data on the degree of PI using different commercially available point-of-care PI assays.

Methods: We prospectively enrolled 24 pts (66 ± 10 yrs, 18 males) who received a GPIIb/IIIa inhibitor during PCI. Pts received tirofiban; n=15 (10mcg/kg, 0.15mcg/kg/min), eptifibatid; n=7 (single bolus; 180mcg/kg, 2mcg/kg/min), and abciximab; n=2 (0.25mg/kg, 0.125mcg/kg/min). We compared the degree of PI using 3 different assays: 1) 20 μ mol ADP/citrate in the IchorTM platelet analyzer (Helena Laboratories, Beaumont, TX), 2) iso-TRAP/citrate and 3) iso-TRAP/PPACK as platelet agonists/anticoagulants respectively in the UltegraTM system (Accumetrics, San-Diego, CA). PI was measured in all pts 30 min following GPIIb/IIIa bolus, with each assay performed on the same blood sample.

Results: The mean \pm SD values of PI following GPIIb/IIIa administration are shown below.

Conclusion: There is significant variation in the degree of PI assessed by the three assays. The greater inter-patient variability and the lower mean PI, detected by the IchorTM system may enhance patient stratification based upon response to GPIIb/IIIa inhibitors. The practical implications of these findings need to be validated in large-scale clinical outcome trials.

