

Antiplatelet and New Anti-Thrombin Studies (Oral Contributions)  
Georgia World Congress Center, Hall D1  
Wednesday, March 20, 2002, 10:30 a.m.-Noon

**Abstract: 887-2**

Citation: Supplement to Journal of the American College of Cardiology, March 6, 2002, Vol. 39, Issue 5, Suppl. A

**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**

**Daniel Soffer**, William W. O'Neill, Kishore J. Harjai, Simon R. Dixon, Judith Boura, Robert D. Safian, Cindy L. Grines, Issam Moussa, Gary S. Roubin, Jeffrey W. Moses

*William Beaumont Hospital, Royal Oak, Michigan, Lenox Hill Heart and Vascular Institute, New York, New York.*

**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 ( $66 \pm 10$  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 $\mu$ mol ADP/citrate in the Ichor<sup>TM</sup> platelet analyzer (Helena Laboratories, Beaumont, TX), 2) iso-TRAP/citrate and 3) iso-TRAP/PPACK as platelet agonists/anticoagulants respectively in the Ultegra<sup>TM</sup> 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 Ichor<sup>TM</sup> 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.

