

Antiplatelet and New Anti-Thrombin Studies (Oral Contributions)
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Suboptimal Platelet Inhibition With Tirofiban in Patients Undergoing Coronary Intervention for Unstable Angina

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Background: The current dosing regimen for tirofiban during percutaneous coronary intervention (PCI) is based on limited platelet inhibition (PI) studies using 5 μ mol of ADP as a platelet agonist. We hypothesized that, when using 20 μ mol of ADP, the current tirofiban dose may not result in optimal PI in pts undergoing PCI for unstable angina (UA).

Methods: We prospectively measured PI in 102 pts (62 \pm 10 yrs, 78% males) who received tirofiban (10mcg/kg, 0.15mcg/kg/min) during PCI. All pts received ASA and clopidogrel prior to the procedure. PI was measured 15 min following tirofiban bolus with the IchorTM point-of-care platelet analyzer (Helena Laboratories, Beaumont, TX), using 20 μ mol of ADP. Pts were classified into 2 groups: Gr I-n=61 with stable or class I Braunwald unstable angina (UA) and Gr II-n=41 with class II or III UA.

Results: Gr II pts were more likely to have received b blockers (88 vs 66%, p=0.012), IV heparin (93 vs 18%, p<0.0001), and to have a recent MI (34 vs 0%, p<0.0001). The groups were similar in other respects. PI and % of pts who achieved >70% PI in each Gr are shown below. In multivariate analysis, class II or III UA was independently associated with <70% PI (OR 11.9, 95%CI 2.5 to 57.3, p=0.002).

Conclusions: The current dose of tirofiban used in pts undergoing PCI for UA appears to be sub-optimal. Our findings may explain the mixed results of recent trials with tirofiban in such pts. Large-scale, prospective studies should evaluate whether tirofiban dose adjustment will have an impact on clinical outcome.

