EFFECT OF BIVALIRUDIN AND VASCULAR CLOSURE DEVICE ON THE BLEEDING OUTCOMES FOLLOWING PERCUTANEOUS CORONARY INTERVENTIONS

i2 Poster Contributions
Ernest N. Morial Convention Center, Hall F
Tuesday, April 05, 2011, 9:30 a.m.-10:45 a.m.

Session Title: Vascular Access, Closure Devices, Complications
Abstract Category: 24. Vascular Access, Closure Devices and Complications
Session-Poster Board Number: 2518-542

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Background: Bivalirudin is known to reduce bleeding outcomes following PCI over Unfractionated Heparin (UFH). Whether such bleeding advantage depends upon concomitant use of vascular closure device (VCD) is not clear.

Methods: Among 5142 consecutive patients who had PCI, 4135 patients received VCD and 1007 patients received manual compression (MC). In-hospital bleeding outcomes defined by the ACC NCDR were monitored (gastrointestinal, retroperitoneal, entry site, genito-urinary bleeding). ‘Other’ bleeding was defined as bleeding from a non-specified site that resulted in either a drop in hemoglobin >3 gms/dl or blood transfusion or prolongation of the hospital stay. Composite bleeding outcome was defined as the presence of any of the above bleeding outcome.

Results: Of 4135 patients who had VCD, bivalirudin significantly reduced the composite bleeding outcome over UFH (2.9% vs. 0.6%). Of 1007 patients who had MC, bivalirudin significantly reduced the composite bleeding outcome over UFH (6% vs. 1.8%). Similarly, significant reduction in ‘other’ bleeding outcome was seen with bivalirudin over UFH in both groups (Table). The relative risk reduction of composite bleeding outcome with bivalirudin over UFH was 0.22 (95% CI, 0.11-0.43) in the VCD group and 0.30 (95% CI, 0.11-0.82) in the MC group.

Conclusion: Bivalirudin significantly reduces the bleeding outcomes following PCI in both VCD as well as the MC group. Combination use of bivalirudin and VCD results in a greater reduction in bleeding outcomes.