THE COMPARATIVE EFFICACY OF BIVALIRUDIN IS MARKEDLY ATTENUATED BY USE OF RADIAL ACCESS: INSIGHTS FROM BLUE CROSS BLUE SHIELD OF MICHIGAN CARDIOVASCULAR CONSORTIUM (BMC2)

Moderated Poster Contributions
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Background: Bivalirudin has demonstrated a reduction in bleeding during trans-femoral (TF) percutaneous coronary intervention (PCI), mostly driven by reduction in access site bleeding. Radial access is increasingly being used in the United States due to its association with markedly lower rates of bleeding. The comparative efficacy of bivalirudin in trans-radial intervention (TRI) remains unknown.

Methods: Data for patients undergoing PCI between January 2010 and March 2014 at the 47 hospitals participating in the BMC2 were utilized. Propensity matching was used within cohorts defined by access site and the impact of bivalirudin use on in-hospital outcomes evaluated with Fisher’s exact tests. The patient population, exclusion criteria and analysis design is described in Figure 1.

Results: Among patients undergoing TFI, use of bivalirudin was associated with a reduction in bleeding compared with both glycoprotein IIbIIIa inhibitors (GPI, OR 0.47, NNT 56, p<0.001) and heparin (OR 0.71, NNT 197, p<0.001). Among patients undergoing TRI, there was a more modest reduction in bleeding with bivalirudin compared with GPI (OR 0.56, NNT 161, p=0.016) and no difference in bleeding compared with heparin (OR 1, p=1).

Conclusion: The reduction in bleeding associated with bivalirudin use is minimal to absent in patients treated with TRI. Given its lower cost, heparin should be the preferred anticoagulation strategy in those undergoing radial PCI.