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IMPACT OF VASCULAR CLOSURE WITH THE PRE-CLOSURE TECHNIQUE ON ADVERSE EVENTS IN PATIENTS UNDERGOING TRANSFEMORAL BALLOON AORTIC VALVULOPLASTY: RESULTS FROM A 2-CENTER REGISTRY

i2 Poster Contributions
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Background: Ischemic and bleeding complications, or net adverse clinical events (NACE), are common following transfemoral balloon aortic valvuloplasty (BAV). The impact of suture-mediated vascular closure on NACE in this setting is not known.

Methods: We conducted a retrospective review of 428 consecutive patients who underwent BAV with large sheaths (10-13 French) over a 6-year period at two high-volume academic centers. Vascular closure was performed using the ProGlide (Abbott Vascular) device. NACE was defined as the composite of major bleeding and major adverse clinical events (MACE). All events were adjudicated by an independent CEC who were blinded to antithrombin use.

Results: Pre-closure was performed in 269 (62.8%) of patients. While bivalirudin was used more frequently in those with pre-closure (60.6% vs. 37.7%, $p < 0.001$), a history of prior BAV (11.1% vs. 3.6%, $p = 0.04$) and peripheral vascular disease (30.7% vs. 19.7%, $p = 0.01$) was more common in those not undergoing pre-closure ($n = 159$, 37%). Other clinical and demographic features were well balanced between groups. Vascular closure was associated with a significant reduction in NACE (Figure). Results remained significant after adjusting for baseline differences and bivalirudin use (OR 0.38, 95% CI: 0.21 - 0.68; $p = 0.001$).

Conclusions: Our study suggests that suture-mediated vascular closure results in a substantial reduction in NACE after transfemoral BAV. Large randomized clinical trials should be conducted to confirm our results.

