**THE SAFETY AND FEASIBILITY OF A NOVEL CLOSURE TECHNIQUE IN TRANSCATHETER AORTIC VALVE REPLACEMENT**

**G.A. Medranda**, R. Schwartz, S. Green

NYU Winthrop Hospital, Mineola, NY, USA

**Background:**The common femoral artery remains the predominant access site for large bore sheaths in structural interventions worldwide. In transcatheter aortic valve replacement (TAVR), vascular complications contribute to post-procedural mortality. With the evolution of, TAVR, lower-profile aortic valves have lead to smaller diameter sheaths. Despite this, rates of vascular complications remain unchanged.

**Objective:** The purpose of this study was to compare the safety and feasibility of the conventional contralateral balloon occlusion technique (CBOT), accessing both femoral arteries, to a novel ipsilateral balloon occlusion technique (IBOT), in which one femoral artery is accessed, for closing transfemoral access sites in TAVR.

**Method:** In this retrospective, observational, study from 2013-2016, we reviewed data on 690 patients who underwent TAVR at our institution. Data were dichotomized when the transfemoral closure method changed from CBOT (2013-2014) to IBOT (2015-2016). Cohort 1 utilized CBOT and cohort 2 utilized IBOT. Our primary outcome was vascular complications within the first 30 days following TAVR. Vascular outcomes from our institution were compared to national data in the transcatheter valve therapy (TVT) registry.

**Results:** The 690 patients had a mean age of 82.7±8.2 years and were 47.1% male. Cohort 1 consisted of 277 patients and cohort 2 consisted of 413 patients. In this small sample, there was a trend towards decreasing rates of vascular complications in cohort 2 (2.9%) when compared to cohort 1 (1.9%) (p=0.44). Data from the national TVT registry demonstrated that vascular complications remained unchanged when comparing 2013-2014 to 2015-2016 (5.0% vs 4.8%, p=0.72).

**Conclusion:**Vascular complications following TAVR remain unchanged despite improvements in delivery systems. Development of a novel closure technique that can reduce the rates of vascular complications carries significant implications. Our initial early experience using the novel IBOT, avoided artery trauma and manipulation in one limb, and resulted in a trend towards fewer vascular complications. Further studies in larger populations are needed to confirm these findings.