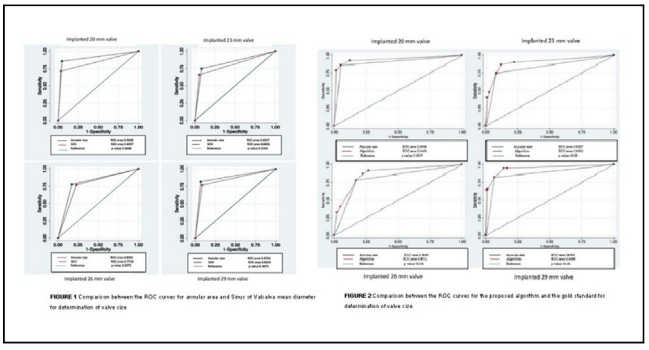
RESULTS ROC curves of the SoV mean diameter for each valve size showed no significant difference when compared to the clinically accepted annular area ($p>0.05$). ROC curve analysis with logistic regression comparing a multivariable algorithm that included annular size, gender discrimination and SoV mean diameter showed a higher accuracy than the annular area alone [$p<0.05$ for valve sizes 23, 26 and 29; p 0.1917 for valve size 20 (for valve size 20, ROC area was 0.9048 when applying annular size and 0.9455 when applying the multivariable algorithm)]. In our model, the combined use of SoV, gender and annular area resulted in improved accuracy for valve sizing.



CONCLUSION The SoV mean diameter is a useful tool for valve selection in patients undergoing TAVR. Moreover, when SoV is used in combination with annular size and gender, accuracy to predict actual valve size increases.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

TCT-778

Valve-In-Valve (ViV) Transcatheter Aortic Valve Replacement (TAVR): A Comparison of Failed Stentless and Stented Surgical Bio-prosthetic Aortic Valve

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BACKGROUND The literature is limited on ViV TAVR in stentless vs. stented bioprosthetic surgical aortic valve.

METHODS We retrospectively analyzed 36 patients who underwent ViV TAVR in prior surgical bioprosthetic valves at Wake Forest Baptist Medical Center from October 2014 to December 2016. 28/36 (77.8%) ViV TAVR were with prior stentless while 8/36 (22.2%) were with stented bioprosthetic valves. The initial stentless surgical valves were implanted using a root replacement technique. A p-value less than 0.05 was considered statistically significant in this study.

RESULTS ViV TAVR procedure success was 100% in both groups. The most commonly used TAVR was the Medtronic CoreValve Evolute: 5/8 (62.5%) and 17/28 (60.7%) in the stented and stentless group, respectively. The average prior surgical aortic valve size in the stented and stentless group was 23.9±2.3mm and 26.0±1.8mm, respectively, and the average TAVR size was 24.5±1.6mm and 28.1±2.6mm, respectively. 6/28 (21%) in the stentless group required a second TAVR compared 0/8 (0%, p=0.07) in the stented group. Moderate/severe paravalvular leak (PVL) was more common in stentless than stented group, however was not statistically significant. Longitudinal comparison of clinical outcomes and hemodynamics are listed in Table 1.

Table 1	1 Month			6 Months			12 Months		
	Stented	Stentless	p-value	Stented	Stentless	p-value	Stented	Stentless	p-value
Re-hospitalization	25%	17.9%	0.61	37.5%	21.4%	0.31	37.5%	21.4%	0.31
Death	0%	7.1%	0.38	12%	10.7%	0.87	12%	10.7%	0.87
Cardiovascular Death	0%	0%	-	0%	0%	-	0%	0%	-
Stroke	0%	7.1%	0.38	0%	7.1%	0.38	0%	7.1%	0.38
VARC-2 Major Complications	0%	0%	-	0%	0%	-	0%	0%	-
VARC-2 Minor Complications	12.50%	0%	-	0%	0%	-	0%	0%	-
Peak Gradient (mmHg)	43.1±17.7	22.6±11.5	0.0007	32.4±16.6	17.6±10.5	0.001	63.4±43.3	18.3±10.8	0.005
Mean Gradient (mmHg)	22.6±8.4	12.9±6.8	0.002	31.2±9.6	9.0±4.9	0.0004	29.3±14.6	9.0±4.7	0.002
Change in Mean Aortic Gradient (mmHg)	18.3±16.4	6.2±13.0	-	8.0±10.3	3.8±7.8	-	9.8±20.6	2.8±3.3	-
Chanee in Aortic Valve Area (mm)	0.26±0.22	0.01±0.99	-	0.55±0.55	-0.30±0.55	-	-0.08±0.23	0.10±0.61	-
Mild Aortic Regurgitation	12.50%	41.7%	0.134	0%	18.2%	0.51	0%	27.3%	0.401
Moderate-Severe Aortic Regurgitation	0%	12.5%	0.294	0%	36.4%	0.31	0%	27.3%	0.401

CONCLUSION Procedure success, mortality, complication and hospitalization rates were similar in both groups. A second TAVR was more frequently required in stentless group. Moderate/severe PVL was more prevalent in stentless group up to 12-month follow up. The mean and peak aortic gradients were significantly higher in the stented group.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

TCT-779

Impact of Conscious Sedation Versus General Anesthesia on TAVR Outcomes: A Propensity-Matched Study

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BACKGROUND Conscious sedation with local anesthesia (CS) has gained popularity as an alternative to traditional general anesthesia (GA) for transcatheter aortic valve replacement (TAVR) in many experienced TAVR centers. Studies comparing the two anesthetic approaches have observed shorter procedure times, decreased ICU and hospital length-of-stays (LOS), and lower procedural costs with the use of CS.

METHODS Consecutive, commercial-use TAVR patients from 2012 to 2017 at our institution were analyzed. Using propensity score analysis, transfemoral access CS patients were matched in a 1:1 fashion with GA patients to control for significant intergroup differences in baseline characteristics. Composite adverse outcomes, procedural characteristics, length of stay after TAVR, and financials were analyzed.

RESULTS From a cohort of 595 patients who underwent TAVR at our institution since 2012, 94 CSA and 94 matched GA patients were analyzed. Of the CS cases reviewed, 2 cases required procedural conversion to GA. Self-expanding valves were less frequently used with CS ($p<0.001$). Fluoroscopy time, radiation dose, requirement for permanent pacemaker use, length of stay after TAVR, and direct cost/patient were all significantly lower with CS compared to GA, while CS contribution margin/patient was significantly higher (all $p<0.01$). An analysis of composite adverse events, including death, myocardial infarction, stroke, cardiac arrest, new atrial fibrillation, new dialysis, major vascular events, and unplanned vascular surgery, revealed that GA patients were 2.2 times more likely to experience a major event than matched CS cohorts. (95% confidence interval: 1.09-4.32; $p<0.03$).

CONCLUSION Conscious sedation TAVR patients are 2.2 times less likely to experience a major perioperative event compared with patients that undergo general anesthesia with respect to a composite of death, myocardial infarction, stroke, cardiac arrest, new atrial fibrillation, new dialysis, major vascular event, and unplanned vascular surgery. In addition, CS is associated with decreased fluoroscopy time and radiation exposure, decreased LOS after TAVR and improved hospital reimbursement.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic