North-America and South-America. Transfemoral approach was used in 83% of the cases followed by transapical approach (10%). Most procedures were performed in a catheterization laboratory (74%) or hybrid room (29%). An anesthesiologist assisted the transfemoral/subclavian approach procedures in 94% of centers. General anesthesia was used systematically in 43% of the centers, and 34% used general anesthesia occasionally (<25% of patients). TEE guidance was systematically used in 45% of centers. Valve type was spited half-half between balloon-expandable (Edwards valve) and self-expandable (mainly CoreValve) systems. Aortography was the most common exam used for assessing residual aortic regurgitation (90%), followed by hemodynamic evaluation (65%) and TEE (55%). Conversely, the operators relied firsts on TEE (40%) in case of discrepancies, followed by aortography (28%) and hemodynamic assessment (21%). Heparin (99.4%) was the most common anticoagulation therapy during the procedure, but activated clotting time (ACT) guidance was implemented in only 36% of the centers.

CONCLUSIONS This survey highlights several differences in procedural management particularly among the choice of the primary anesthetic regimen and the systematic TEE support during TAVI. Notably, discordance is present regarding the best technique to evaluate AR after TAVI, one of the most important predictors of long-term mortality.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

TCT-685

Results After Transcatheter Valve-in-Valve Implantation And Redo Aortic Valve Surgery For Failed Aortic Bioprostheses

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BACKGROUND Redo surgery for degeneration of biological aortic valve prostheses can be a high-risk procedure. Transcatheter aortic valve-in-valve implantation poses a less-invasive treatment alternative for these patients. We aim to present our clinical outcomes of consecutive patients after a valve-in-valve TAVI (TAV-in-SAV) as compared to a standard reoperation (SAV-in-SAV) for a failing surgical bioprosthesis in a single center setting.

METHODS All SAV-in-SAV and TAV-in-SAV patients from January 2001 to October 2014 were retrospectively reviewed. Patients with previous mechanical or transcatheter valves, active endocarditis and concomitant cardiac procedures were excluded. Patient characteristics, preoperative data, post-procedural complications and 30-day mortality were collected from a designated database.

RESULTS Of all reviewed patients, 102 fulfilled the inclusion criteria: 50 (49%) underwent a transcatheter valve-in-valve procedure, while 52 (51%) patients underwent redo-surgery. TAV-in-SAV patients were significantly older and had a higher mean logistic EuroSCORE than patients in the SAV-in-SAV group (78.1±6.7years vs. 66.2±13.1years, P<0.001 and 27.4%±18.7% vs. 14.4%±10%, P<0.001, respectively). There was no significant difference between the TAV-in-SAV and SAV-in-SAV group in 30-day mortality (4% vs. 0%; P= 0.238), postoperative myocardial infarction (2% vs. 2%; p=0.49), stroke (4% vs. 2%; p=0.614) or dialysis (12% vs. 2%; p=0.057). Postoperative pacemaker implantation and chest tube output were higher in the SAV-in-SAV group compared to the TAV-in-SAV group (21% vs. 6%, P=0.042 and 0.9±1.0l vs. 0.6±0.9l, P=0.047, respectively). Postoperative gradients were significantly higher in the TAV-in-SAV group (18.6±8.7mmHG vs. 13.8±5.4mmHg; p=0.008).

CONCLUSIONS Our study shows, irrespective of different baseline comorbidities, a low 30-day mortality as well as low postoperative myocardial infarction and stroke rates in patients with failed aortic bioprostheses treated either by surgical redo or transcatheter intervention. The rate of dialysis in the TAV-in-SAV group as well as the high postoperative pacemaker rate in the SAV-in-SAV group will require further evaluation. Nonetheless, older patients or patients with a high surgical risk may benefit from the transcatheter valve-in-valve procedure.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

KEYWORDS Surgical aortic valve replacement, Transcatheter aortic valve replacement, Valve-in-valve

TCT-686

Impact of Aortic Valve Type on Cerebral Ischemic Lesions in DW-MRI after TAVR

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BACKGROUND Subclinical cerebral ischemic lesions are detected by diffusion- weighted magnetic resonance imaging (DW-MRI) in the majority of patients after TAVR which may be associated with impaired short term neurological outcome. The impact of the TAVR device on cerebral ischemic lesions is not well defined. We aimed to analyze the incidence of cerebral ischemic lesions in a large cohort of patients undergoing TAVR with different devices.

METHODS Consecutive high surgical risk patients with severe aortic valve stenosis treated with TAVR underwent DW-MRI 2-4 days after the procedure. DW-MRI scans were analyzed for the occurrence, number and volume of new ischemic lesions by a blinded physician.

RESULTS One-hundred- fifty-two patients were enrolled, the majority received an Edwards SAPIEN 3 (ES 3) (57%), 15.2% an Edwards SAPIEN XT (ES XT), 23.2% a Direct Flow Medical (DFM), 3.3% a Lotus and 1.3% an Evolut R aortic valve. Cerebral ischemic lesions were detected in 70.4%. None of the patients was neurologically symptomatic. Cerebral lesions after TAVR were found for ES XT in 56.5%, ES 3 in 70.9%, DFM in 85.7%, Lotus in 20% and Evolute R 100% of patients, respectively, which was statistically significant in univariate analysis. Logistic regression analysis revealed valve type as the only independent predictor for new cerebral ischemic lesions (p=0.017).

CONCLUSIONS Asymptomatic cerebral ischemic lesions after TAVR are observed frequently. The TAVR device type has a significant impact on the incidence of new cerebral ischemic lesions.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

KEYWORDS Embolization, TAVI

TCT-687

Cerebral protection device for transcatheter valve-in-valve procedures - the ALSTER data

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BACKGROUND Registries for transcatheter valve-in-valve procedures show peri procedural stroke rates of about 2%. Cerebral protection devices may reduce the stroke rate and histopathology findings are unknown.

METHODS Twenty-one patients were treated with implantation of TAVR prostheses into degenerated bioprotheses in the aortic (n=16) and mitral position (n=5), combined with a Claret Cerebral Protection System (Claret Medical, Inc., Santa Rosa, CA, USA) for cerebral protection. For TAVI in aortic position 13 Corevalve/Evolut R, 2 Portico and 1 Sapien valve were used. For bioprostheses in the mitral position Sapien/Sapien 3 prostheses were exclusively implanted. Access routes were transfemoral (n=14), transapical (n=3), transaxillary (n=2) and transseptal (n=2). Mean patient age was 75 ± 1s years; mean logistic EuroSCORE was 35.7%. Clinical follow-up by a cardiologist was obtained 3 days after the intervention and at discharge (mean 9 days). In cases of suspected stroke, a neurologist were consulted. Histological analyses were performed in 7 patients by the CVPath Institute in Gaithersburg, MD (additional 3 analyses are in progress).

RESULTS TAVR device success rate was 77% due to high mean gradients for implantations in the aortic position. Stroke rate up to discharge was 0%. TAVI device success rate was 77% due to high mean gradients