

METHODS Prospective data from a multi-center registry across 22 participating centers in Europe and Canada identified 36 patients with SAA who underwent TAVI with the 20mm SXT THV. Baseline and post-procedural clinical and echocardiographic outcomes were assessed.

RESULTS Mean age was 84 ± 6 yrs, with a strong female preponderance (94%). The median (IQR) STS score was 8.7 (5.4, 12.2) %. Baseline mean aortic gradient, median (IQR) aortic valve area and mean annular dimensions were 49.5 ± 17.6 mmHg, 0.50 (0.40, 0.60) cm² and 18.5 ± 1.6 mm respectively. Fifteen patients (42%) had a pre-existing aortic bioprosthesis measuring 19 (n=6), 21 (n=8) and 23 (n=1) mm, and these patients subsequently underwent valve-in-valve TAVI. The mean aortic annular diameter, as measured with computed tomography, in patients with native AS was 19.1 ± 1.4 mm. A transfemoral approach was undertaken in 92% of cases, with successful implantation in all but 2 patients (6%), with no reports of procedural death, annular rupture or need for a second valve. Balloon post-dilatation occurred in 11% of cases. The incidences of in-hospital stroke, major vascular complication or death were 3, 11, and 6%, respectively. Overall, post-procedural mean transprosthetic gradient and median (IQR) valve areas were 17.7 ± 8.1 mmHg and 1.10 (0.95, 1.30) cm², respectively [native AS: 13.2 ± 5.0 mmHg and 1.22 (1.15, 1.55) cm²; valve-in-valve: 24.0 ± 7.5 mmHg and 0.98 (0.77, 1.10) cm²]. Moderate paravalvular regurgitation was evident in 1 patient.

CONCLUSIONS In patients with severe AS and SAA, TAVI with the 20mm SXT THV is technically feasible, providing satisfactory early clinical and hemodynamic results, with native valve TAVI yielding lower post-procedural gradients compared with valve-in-valve TAVI. Longer-term follow-up in a larger cohort, with clinical and hemodynamic comparisons against larger THV sizes implanted in correspondingly larger aortic annuli will be necessary to truly ascertain the feasibility of TAVI in severe AS patients with SAA.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

KEYWORDS Balloon-expandable, TAVI, TAVR

TCT-638

Rhythm Changes And Pacemaker Incidence Associated With a Repositionable Self Expanding TAVI System: A Prospective Multicenter Analysis

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BACKGROUND Incidence of rhythm changes and permanent pacemaker implantation post TAVI are variable and may differ depending on the device type. This report evaluates the incidence and associated circumstances of the rhythm disturbances observed with the St Jude Medical™ Portico™ Self Expanding TAVI system.

METHODS Rhythm information was collected as part of a prospective, single arm, multicenter study. Between December 2011 and May 2015, 198 TAVI patients were enrolled and treated at 12 sites in the UK, Germany, Netherlands, Denmark and Australia using the 18F and 19F Portico system with a 23mm (50), 25mm (50), 27mm (60) or 29mm (38) valve size. Rhythm changes during the procedure were recorded at baseline and at key steps during the implant procedure. Rhythm was recorded prior to wire passage through the valve, prior to pre-dilatation, immediately post-dilatation, prior to valve crossing, post valve deployment and at the end of the procedure. Rhythm was recorded during recovery and at all follow-up intervals.

RESULTS All 198 patients were successfully treated with the Portico system. The most common rhythm disturbances at baseline were AF (20%), LBBB (4%), and RBBB (2.5%). A total of 24 patients required a permanent pacemaker (PPM) post procedure, with complete heart block as the predominant reason (96%). Depth of implant, valve resheathing or post dilatation did not appear to impact on the need for PPM. There were 23 patients (13.5%) who developed a new LBBB during the procedure, with the majority occurring before valve

deployment (73.9%). An additional 18 patients (11.1%) developed LBBB before discharge.

CONCLUSIONS The Portico TAVI system demonstrated a low rate of PPM implantation and induction of new LBBB post TAVI. There does not appear to be a consistent cause intra-operatively and further analysis is necessary to understand this phenomenon.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

KEYWORDS Aortic stenosis, Pace maker implantation, TAVI

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TAVI in local anesthesia without general anesthesia or deep sedation, a single center comparison of 30-day clinical outcome between balloon-expandable and self-expandable valves

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BACKGROUND Most centers perform transcatheter aortic valve implantation TAVI under general anesthesia (GA) or deep sedation (DS). TAVI under local anesthesia (LA) might result in less peri-procedural episodes of hypotension, shorter procedure time and hospital stay. The aim of this study was to compare feasibility and clinical outcome after TAVI under LA using the self-expandable 18-F-CoreValve prosthesis (MCV) versus the 14-20F-balloon expandable Edwards Sapien XT/3 prosthesis (ESV).

METHODS Between April 2010 and October 2014, 570 consecutive pts underwent successfully transfemoral TAVI in LA exclusively without GA or DS receiving either MCV (23/26/29/31mm) or the ESV (23,26,29mm). Clinical events were evaluated according to the VARC-II criteria.

RESULTS Patients: 361 pts (age 80.6 ± 0.34 years) with severe AS (pmean 43.1 ± 0.77 mmHg, AVA 0.68 ± 0.01 cm²) and high surgical risk (log Euroscore 22.0 ± 0.67 %) underwent successfully TAVI with the MCV and 209 pts (age 81.7 ± 0.41 years, log Euroscore 18.6 ± 0.82 %, pmean 44.2 ± 1.12 mmHg, AVA 0.68 ± 0.02 cm²) received the ESV. Procedural outcome: Device success was 357/361 (98.9%) for MCV and 208/209 (99.5%) for ESV. Conversion to GA occurred in only 4/361 MCV pts., exclusively for complication (1 coronary obstruction, 2 severe AR, 1 prosthesis embolisation with urgent surgery) and in 0 pts after ESV. Conversion to DS occurred in 16/361 (4.4%) MCV pts. and in 5/209 (2.4%) ESV pts. Use of vasopressors were needed in 19/361 (5.2%) MCV pts. and in 6/209 (2.9%) ESV pts. In-lab-death and In-lab stroke rate was 0% in both groups. 30-day clinical outcome: 30 day all-cause mortality and major/minor stroke rate did not differ significantly between valves (death: MCV vs ESV: 5.5% vs 2.4%; $p=0.052$; major stroke: MCV vs ESV: 0.8% vs. 2.4%; $P=0.273$. minor stroke: MCV vs ESV: 0.8% vs. 0.5; $p=0.273$). There was no significant difference between the two valve types concerning major vascular complication (MCV vs ESV: 4.7% vs. 7.9%; $p=0.082$). The rate of new pacemaker implantation was significantly different (MCV vs ESV: 24.4% vs 14.4%, $p<0.01$).

CONCLUSIONS Transfemoral TAVI using LA only is feasible and save in an all-comer TAVI-population using either selfexpandable or balloon-expandable transcatheter heart valves.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

KEYWORDS Aortic disease, Local anesthesia, TAVI

TCT-640

Clinically silent pseudoaneurysms after transcatheter aortic valve implantation (TAVI) using the ProStar XL system-comparison between the CoreValve, the Edwards Sapien XT and the Edwards Sapien 3 Valve

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BACKGROUND Transfemoral aortic valve implantation (TAVI) requires large bore catheters. Access site and vascular complications,