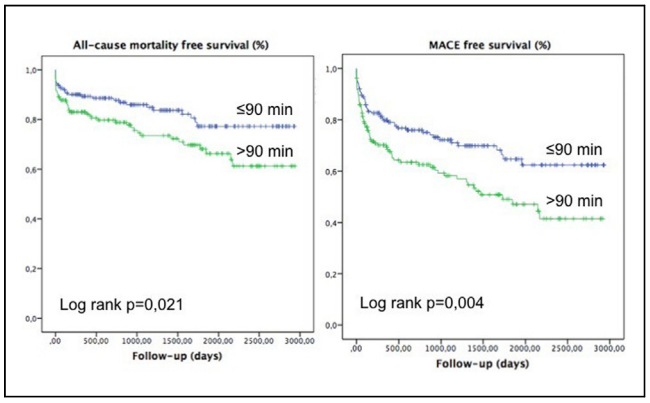

RESULTS The median time from FMC to PPCI were superior in women (116,3±83) than in men (97,9±67) (p=0,000). Only 51,1% of women had a FMCP-PCI time≤90 min compared to 65% of men (p=0,000). Women with FMCP-PCI ≤ 90 compared to those with FMC-PPI > 90 had lower rates of all-cause mortality (8,5% vs 13,5% , P=0,018) and MACE (13,5% vs 28%, p=0,006) during follow-up. FMC-PPCI >90 min was an independent determinant of MACE in a multivariate analysis (HR IC 95%: 1,557 (1,058-2,292) p=0,025).

CONCLUSION FMC-PPCI time≤90 min was associated with better long term prognosis in women. In our registry we found that women had significative higher system delays compared to men. Dedicated studies of specific mechanisms underlying this female disadvantage are mandatory to reduce this gender gap.

CATEGORIES CORONARY: Acute Coronary Syndromes

AORTIC VALVE-IN-VALVE THERAPY

Abstract nos: 158 - 162

TCT-158

Durability of Hemodynamic Results of Valve in Valve TAVR with Bioprosthetic Valve Fracture (BVF)

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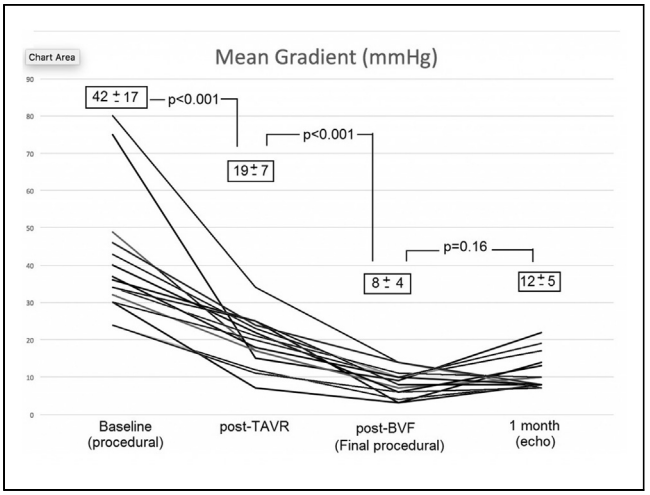
BACKGROUND Valve in Valve Transcatheter Aortic Valve Replacement (VIV TAVR) in failed surgical bioprostheses may be limited by patient prosthesis mismatch (PPM), which has been associated with decreased survival at 1 year. Bioprosthetic valve fracture (BVF) to facilitate VIV TAVR is a safe and effective method to improve procedural hemodynamics, yet the durability of hemodynamic result is not known.

METHODS We analyzed 1-month clinical and echocardiographic data from 18 patients treated with BVF at the time of VIV TAVR. BVF was performed using high-pressure balloons, typically 1 mm larger than the labeled surgical valve size.

RESULTS VIV TAVR and BVF were successful in all 18 patients using self-expanding (n=9) and balloon-expandable (n=9) valves. Survival at 1 month was 100%. Baseline mean transvalvular gradient and aortic valve area (AVA) were 42±17 mmHg and 0.8±0.3 cm2, respectively, which improved to 19±7 mmHg and 1.0±0.3 cm2 following VIV TAVR and 8±4 mmHg and 2.0±0.6 cm2, respectively after BVF (p<0.001 for all comparisons; see Figure). At 1 month follow-up, mean gradient and AVA by echocardiography were 12±5 mmHg and 1.6±0.3 cm2, (p=0.16 and p=0.27, compared with immediate post-procedure measurements).



CONCLUSION The immediate hemodynamic results of BVF to facilitate VIV TAVR are favorable and appear durable at 1 month. Further investigation is needed to assess long-term clinical and hemodynamic results of this novel procedure.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

TCT-159

First look at clinical outcomes of mechanically expanding transcatheter heart valves utilized for failed bioprosthetic aortic valves

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BACKGROUND We aimed to evaluate the performance of the Lotus Aortic Valve Replacement System in patients with a degenerated aortic bioprosthesis undergoing transcatheter valve-in-valve (ViV).

METHODS Data was collected as part of the VIVID (Valve in Valve International Data) Registry, including a total of 1944 patients that underwent aortic valve in valve from 142 centres. The patients had been referred to ViV intervention by local multidisciplinary heart team decision.

RESULTS A total of 33 patients undergoing Lotus ViV (age 75.1 ± 11.8 years, 72.7% males, STS PROM 4.4 ± 3.1%) were evaluated. Surgical valve label size was 24.4 ± 1.6 mm and none of the devices were small (label size ≤ 21mm). A stented bioprosthesis was treated in the majority of cases (n = 26, 78.8%). Degeneration modes were pure regurgitation in 16 patients (48.5%), stenosis in 6 patients (18.2%) and a mixed failure in 11 patients (33.3%). Most cases were performed using transfemoral access (96.8%) under local anaesthesia (72.7%). Surgical valve predilation was performed in only 2 cases (6.5%), while postdilation was required in none of the cases. In 5 patients (15.6%) initial device position was deemed not satisfactory so that the device

was retrieved and repositioned. There were no cases of coronary occlusion. Final positioning was satisfactory in all cases. Final aortic regurgitation was absent or mild (11.1%) in all patients. Post implantation mean gradient was 14.4 ± 5.6 mmHg. The rate of elevated post procedural gradient (mean ≥ 20mmHg) was 12.9%. Median (interquartile range) hospital length of stay was 6 days. No patient died within 30 days, however one patient (3.7%) was diagnosed with a major stroke. Major vascular complications occurred in 2 patients (6.5%), while no patients developed acute kidney injury. New permanent pacemaker rate at discharge was only 4.3%.

CONCLUSION This is the first large data collection of Lotus implantation in patients with failed aortic bioprostheses. Clinical outcomes were reassuring with acceptable residual mean gradients, no significant paravalvular leaks and a low rate of new pacemakers.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

TCT-160

Valve-in-Valve Transcatheter Aortic Implantation in Degenerative Sutureless Bioprostheses

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BACKGROUND Transcatheter valve-in-valve implantation (ViV) has evolved as a viable strategy in suitable cases of patients with a failed surgical bioprosthesis heat valves (SHV). Sutureless aortic bioprosthesis are a relatively new subcategory of the lasts. Our aim was to evaluate the performance of ViV in sutureless SHVs.

METHODS An international, multicenter registry was developed to collect data on ViV cases performed in sutureless surgical valves as part of the Valve-in-Valve International Data (VIVID) Registry. A total of 25 patients with failed sutureless SHV treated by ViV were evaluated.

RESULTS Mean patients age was 80.4 ± 8 years, 80% females, STS-PROM 9.4 ± 5.3%. Sutureless SHV size ranged from 21 to 25 (median 23) mm and included the Perceval (Sorin Biomedica, Salugia, Italy; n = 21), the ATS 3F Enable (Medtronic Inc., Minneapolis, MN, USA; n = 3) and the Intuity (Edwards Lifesciences, Irvine, CA, USA; n=1). The indication for ViV was significant stenosis (n = 5), regurgitation (n = 5) or a mixture of the two (n = 15). The ViV was attempted via the transfemoral (n = 18) and trans-apical (n = 7) approaches with the SAPIEN XT (n = 10), Sapien 3 (n = 7) and CoreValve (n = 8), sizes 23mm to 29 mm (median 23 mm). There were 2 cases (9%) with a need for permanent pacemaker implantation, 1 case with major vascular complication and 1 case with major/life threatening bleeding. Implantation was successful in all patients, with an average post-procedural mean gradient of 14.1 ± 8.8 mmHg. There were no cases with AR > moderate and no need for 2nd prosthesis implantation. There was no coronary obstruction in any of these cases and one patient died during 30-day follow-up (4%).

CONCLUSION ViV implantation inside selected failed sutureless SHV is feasible and associated with reasonable post procedural hemodynamics. The safety of this approach will be further evaluated in the future.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

TCT-161

Impact of Pre-existent Prosthesis-Patient Mismatch on Survival Following Aortic Valve-in-Valve Procedures

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BACKGROUND Transcatheter valve-in-valve (ViV) implantation is an alternative for the treatment of patients with degenerated bioprostheses. Small label size of the surgical valve was associated with increased mortality after ViV. Our objective was to determine whether this association is, at least in part, related to pre-existent prosthesis-patient mismatch (PPM), i.e. a bioprosthesis that is too small in relation to the body size.

METHODS Data of 1168 patients included in the VIVID registry were analyzed. Pre-existent PPM of the surgical valve was determined using a reference value of EOA for each given model and size of implanted prosthetic valve indexed for body surface. Severe PPM was defined according to the criteria proposed by VARC 2: indexed EOA <0.65 cm2/m2 if body mass index (BMI) is <30 kg/m2 or <0.6 cm2/m2 if BMI is ≥30 kg/m2. The primary study endpoint was 1-year mortality.

RESULTS Among the 1168 patients included in the registry, 89 (7.6%) patients had pre-existent severe PPM. Patients with severe PPM had 2.4-fold higher (p≤0.01) 30-day (10.3%) and 1-year (28.6%) mortality rates compared to patients with no severe PPM (4.3% and 11.9%, respectively). After adjusting for label surgical valve size, STS score, renal failure, and diabetes, presence of pre-existent severe PPM was associated with increased risk of 1-year mortality (OR: 1.77; 95% CI: 1.02-3.07; p=0.04). Patients with severe PPM also more frequently harbored high post-procedural gradient (mean gradient ≥ 20 mmHg).

CONCLUSION Pre-existent PPM of the failed surgical valve is strongly and independently associated with increased risk of mortality following ViV.

CATEGORIES STRUCTURAL: Valvular Disease: Aortic

TCT-162

Surgical Bioprosthesis Size Definition and Hemodynamic Performance following Aortic Valve-in-Valve: Insights from the Valve-in-Valve International Data (VIVID) Registry

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