KEYWORDS Left ventricular remodeling, Renal Denervation, Resistant hypertension

CONCLUSIONS Despite important design differences between the two self-expanding transcatheter valves, both devices were safe and effective for management of degenerated aortic bioprosthesis. The present study has identified dissimilarities in hemodynamic performance and clinical outcomes that require confirmation in future studies.

TCT-91
Comparison of Portico® and CoreValveTM Self-expanding Transcatheter Heart Valves for the Treatment of Failed Surgical Aortic Bioprosthesis: Insights from the Valve in Valve International Data (VIVID) Registry

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BACKGROUND Portico® (St. Jude Medical) and CoreValve® (Medtronic) are both nitinol based self-expanding transcatheter heart valves with unique features enabling device retrievability for Portico and supra annular valve position for CoreValve systems. In this study, we sought to investigate the effect of the different self-expanding valve design on hemodynamic and clinical performance when implanted for degenerated aortic valve bioprosthesis (valve in valve, VIV).

METHODS Patients undergoing Portico implantation for degenerated artificial bioprosthesis were compared to those undergoing CoreValve implantation after matching for differences in age, gender, STS score, arterial access, bioprosthesis valve design and label size in a 1:2 manner. Procedural and clinical outcomes were defined by Valve Academic Research Consortium II (VARC-II).

RESULTS A total of 155 patients that underwent VIV using a self-expanding device were included in the analysis (age 79±8yrs, 61.5% female). The group included 43 Portico implantations that were matched with 90 CoreValve VIV patients having similar patient and surgical valve characteristics. Baseline demographic and procedural characteristics, echocardiographic and clinical outcomes are detailed in the table. There were no differences in any procedural characteristics between the two groups, except for the external transcatheter valve diameter selected being significantly lower for the CoreValve and proportion of patients undergoing procedure under general anesthesia and with TEE guidance, which was significantly higher for the Portico group. Clinical outcomes were similar except for major vascular complications that were significantly lower in Portico implantations. Site reported echocardiographic parameters showed a greater proportion of patients with more than mild aortic insufficiency after the procedure and a smaller effective orifice area for the Portico compared to CoreValve group. Blinded core lab analysis of post implantation imaging of all cases analyzed is being completed.

TCT-92
Transcatheter Aortic Valve Replacement in Asian Pacific Countries

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BACKGROUND Transcatheter aortic valve replacement (TAVR) has been established as alternative treatment for inoperable or high-risk patients with symptomatic severe aortic stenosis. We sought to evaluate the clinical outcomes of TAVR in Asian Pacific countries.

METHODS The Asian TAVR registry was conducted in 12 centres from 6 countries between February 2009 and February 2015. Baseline demographics, procedural and echocardiographic data were prospectively collected from each center and entered into dedicated electronic case report form.

RESULTS Nine hundred and forty patients were included. Mean age was 82.1 ± 6.5 years and 52.9% were female. Edwards SAPIEN/XT and CoreValve were used in 65.4% and 34.6% of patients, respectively. Approaches were either transarterial (transfemoral, 85.8%; subclavian, 0.4%; direct aortic, 1.6%) or transapical (12.0%), respectively.

TAVR I

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Mean logistic European System for Cardiac Operative Risk Evaluation (EuroSCORE) and Society of Thoracic Surgeons (STS) score were 21.6 ± 15.5 and 7.0 ± 5.6, respectively. Rates of death at 30 days and 1 year were 3.4% and 10.6%, respectively. At 30 days, the incidence of all stroke, major vascular complications, life-threatening bleeding, and acute kidney injury (stage 2 or 3) were 3.0%, 5.2%, 7.6% and 4.2%, respectively. Paravalvular regurgitation moderate or greater occurred 9.5%. Device success rate and combined safety endpoint at 30 days were 86.2% and 81.0%, respectively. In a multivariate model, female, chronic kidney disease, diabetes mellitus, pulmonary disease, peripheral vascular disease, paravalvular regurgitation mild or greater, and STS score were significantly associated with reduced survival.

**CONCLUSIONS** This registry reflects the real-life experience of TAVR in patients with increased risk in Asian Pacific countries.

**Clinical outcomes of TAVR in Asian Pacific countries**

<table>
<thead>
<tr>
<th></th>
<th>Overall (N = 940)</th>
<th>SAPIEN/XT (N = 615)</th>
<th>CoreValve (N = 325)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortality at 30 days</td>
<td>3.4%</td>
<td>4.0%</td>
<td>2.5%</td>
<td>0.23</td>
</tr>
<tr>
<td>Mortality at 1 year</td>
<td>10.6%</td>
<td>7.6%</td>
<td>14.5%</td>
<td>0.02</td>
</tr>
<tr>
<td>All stroke</td>
<td>3.0%</td>
<td>2.8%</td>
<td>3.4%</td>
<td>0.69</td>
</tr>
<tr>
<td>Life-threatening bleeding</td>
<td>7.6%</td>
<td>8.1%</td>
<td>6.5%</td>
<td>0.36</td>
</tr>
<tr>
<td>Acute kidney injury stage 2-3</td>
<td>4.3%</td>
<td>3.6%</td>
<td>5.5%</td>
<td>0.16</td>
</tr>
<tr>
<td>Major vascular complications</td>
<td>5.2%</td>
<td>6.0%</td>
<td>3.7%</td>
<td>0.13</td>
</tr>
<tr>
<td>Device success</td>
<td>86.2%</td>
<td>90.6%</td>
<td>78.1%</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Safety endpoint</td>
<td>81.0%</td>
<td>80.3%</td>
<td>82.2%</td>
<td>0.51</td>
</tr>
</tbody>
</table>

**CATEGORIES STRUCTURAL:** Valvular Disease: Aortic

**KEYWORDS** Asian, Clinical outcomes, TAVR

**TCT-93**

**Improvement in Renal Function and its Impact on All-cause Mortality after Transcatheter Aortic Valve Replacement (TAVR): Experience from the PARTNER Trial**

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**BACKGROUND** High surgical risk and inoperable patients with severe aortic stenosis (AS) undergoing TAVR often have reduced baseline renal function. The impact of TAVR on improving this reduced baseline renal function is unknown.

**METHODS** All patients undergoing TAVR from the PARTNER 1A (high surgical risk), PARTNER IB (inoperable), and both the randomized and non-randomized continued access cohorts with glomerular filtration rate (GFR, utilizing the modification of diet in renal disease formula) < 60 mL/min were analyzed. Patients were categorized as improved GFR (30-day follow-up GFR > 10% higher than baseline pre-TAVR GFR), worsened GFR (30-day follow-up GFR < 10% lower than baseline pre-TAVR GFR), or no significant change (not fitting either previous group). Baseline characteristics and 1-year all-cause mortality, as well as repeat hospitalization rates, were compared between groups. Cox regression models were used to determine multivariable predictors of all-cause 1-year mortality.

**RESULTS** In total, 822 patients were analyzed, of which 345 (42%) showed an improvement in GFR, 197 (24%) had worsening in GFR, and 280 (34%) had no significant change in GFR. Comparing patients with improved GFR with those with worsening GFR and those with no significant change in GFR, there was no difference in the mean age, BMI, diabetes mellitus, COPD, CAD, PAD, pulmonary hypertension, renal disease (Cr ≥ 2 mg/dl), NYHA class III or IV symptoms, liver disease, mean transaortic gradient, mean cardiac index, or mean baseline EF. The improved GFR group had a greater percentage of females (55.1% for improved GFR group vs. 40.1% for worsened GFR group vs. 47.1% for no change group, p < 0.01), lower median STS score (10.9 vs. 11.0 vs. 10.6, p = 0.04), and had less smokers (39.4% vs. 54.6% vs. 48.0%, p < 0.01). Adjudicated 1-year all-cause mortality was lower in the improved GFR group compared to the worsened and no significant change groups (15.4% vs. 25.8% vs. 19.1%, p < 0.01), as well as 1-year repeat hospitalization (31.5% vs. 30.4 vs. 18.5%, p < 0.01). In a multivariable analysis, after adjusting for age, gender, BMI, STS score, diabetes mellitus, COPD, stroke or TIA, baseline ejection fraction, prior CABG, and baseline GFR, improvement in GFR was associated with reduced 1-year mortality (HR 0.51, 95% CI 0.34–0.76, p < 0.01).

**CONCLUSIONS** Among those with reduced baseline GFR, TAVR results in an improvement in GFR in a substantial portion of patients. Improvement in GFR following TAVR is independently associated with a reduction in all-cause 1-year mortality in patients with severely symptomatic AS who are at high surgical risk or are inoperable.

**CATEGORIES STRUCTURAL:** Valvular Disease: Aortic

**KEYWORDS** Renal function, Transcatheter aortic valve replacement

**TCT-94**

**Balloon Post-Dilation of the Self-Expanding CoreValve Transcatheter Aortic Valve Bioprosthesis: Procedural Results and in Hospital Outcomes from 3532 Patients in the CoreValve US Pivotal and Continued Access Trials**

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**BACKGROUND** The CoreValve self-expanding frame does not require balloon expansion, but procedural post-dilation of the frame can be performed in patients with suboptimal acute results. We sought to define the incidence of balloon post-dilation (BPD) and the association