B-071

Title: Comparison of Incidence, and Predictors of Short-term Hospital Readmissions After Transcatheter vs Surgical Aortic Valve Replacement: Insight From the Nationwide Readmissions Database (NRD)

Category: Valvular Interventions and Structural Heart Disease

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Background: Transcatheter aortic valve replacement (TAVR) is an established therapy for patients with severe aortic stenosis who are at high or intermediate risk for surgical aortic valve replacement (SAVR). National data on readmission rates and predictors of readmission in TAVR as compared to SAVR are less well known and this was the focus of this research.

Methods: We did a secondary analysis of the Nationwide Readmissions Database (NRD) for the year 2013. We included all patients who underwent TAVR or SAVR from 21 states included in NRD database in 2013. From this group, all patients readmitted within 30 days were recorded.

Results: Mean age of TAVR patients was significantly higher (81.4 ± 8.5 vs. 68.8 ± 13.1 P<0.001) and as was the Charlson comorbidity score (2.6 ± 1.7 vs 1.6 ± 1.5, P<0.001). The TAVR group had a significantly higher rate of 30-day readmission rate and in-hospital mortality (table-1). However, after adjusting for age and comorbidities, TAVR group did not have an increased readmission rate. Hospitalization in teaching hospitals was associated with lower readmission rate (P<0.01).

The most common causes of 30-day readmission for TAVR were heart failure (20.3%) followed by procedure complication (10%) and then arrhythmia (5.5%).

Conclusion: The readmission rate after TAVR is higher than SAVR, but patients underwent TAVR are older and sicker with much more comorbidities. After adjusting for other risk factors, TAVR was not associated with higher readmission rate. Heart failure is a major cause of readmission in patients undergoing TAVR and SAVR, which points out to importance of close follow up of these patient from HF standpoint on discharge.

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remaining 165 patients with aortic valve area <1 cm2. 77 (47%) had either a peak velocity <4.0 m2 or mean gradient <40 mmHg (LG group) and 88 (53%) had both peak velocity >4.0 m2 and mean gradient >40 mmHg (HG group) across the AV. Outcomes were defined by the valve academic research consortium 2 criteria when applicable and compared between the LG and HG groups via Fisher’s exact test. Median follow-up was 367 days. Continuous data are shown as median [interquartile range] and categorical data are shown as proportions.

Results: The 30-day mortality risk as assessed by Society of Thoracic Surgery score was not significantly different between the LG and HG groups (5.9% [3.5-8.1] vs 6.2% [4.4-7.6], p=0.45). There were no significant differences in outcomes (Table).

Conclusion: In a high-volume center, patients undergoing TAVR for severe AS with LG preserved LVEF have no significant differences in adverse outcomes, both in-hospital and on 1-year follow-up, when compared to patients with HG preserved LVEF.

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B-073

Title: Self-expanding CoreValve vs. Balloon Expandable Sapien Valve: Short and Long Term Outcomes
Category: Valvular Interventions and Structural Heart Disease
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Background: The two main devices used for the treatment of severe aortic stenosis (AS) via transcatheter aortic valve repair (TAVR) are the self-expanding Medtronic Corevalve and balloon expandable Edwards Sapien valve. Limited data exists on the result of a comprehensive TAVR program using these two valves. Our aim was to compare clinical outcomes after TAVR with these two commercially available valves.

Methods: 460 consecutively treated patients between January 2011 and September 2016 from five tertiary care centers were selected for this study. Baseline demographics and outcomes for both cohorts were obtained. Univariate and multivariate analyses were performed using SAS 9.4 (SAS Institute, Cary, NC).

Results: A total of 168 patients were treated with CoreValve (CoreValve Classic and EvolutR) and 292 patients were treated with Sapien (Sapien 3, Sapien XT, Sapien) valve. Contrast volume and fluoroscopy time was significantly less with Sapien valve use. Lower permanent pacemaker requirement, post procedure aortic insufficiency and death on discharge noted with Sapien valve when compared to CoreValve. However, RBC transfusion was notably higher with Sapien valve.

Conclusion: Global marketshare for TAVR has been in the favor of the Sapien valve system, and it appears that real-world data analyzed here among high volume TAVR sites demonstrates that the outcomes are better in the Sapien valve than with CoreValve. Although this analysis was corrected for confounders, there may be an inherent bias towards treating sicker patients with CoreValve given its lower profile and less aggressive pacing requirements.

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B-074

Title: Impact Of Renal Function On Valvular Hemodynamics And Clinical Outcomes In Transcatheter Aortic Valve Replacement
Category: Valvular Interventions and Structural Heart Disease
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