

METHODS A retrospective review of a single site's experience with AVR was done. We looked at documentation/coding, post-operative admissions and the impact of the transfer penalty. From 11/2007 through 7/2012, 110 patients were coded with major complications of co-morbidities (220). We then looked at patients admitted to the post anesthesia unit (PACU) compared to the intensive care unit (ICU). 25 patients from 6/2013 through 12/2013 met protocol criteria and were admitted to the PACU and 62 to the ICU. We also analyzed the impact of the transfer policy of a sampling of 20 patients.

RESULTS The documentation review of the 110 patients coded with 220 revealed that 59(53%) had evidence which supported acute on chronic heart failure and may have been eligible for a major complication or co-morbidities (219) diagnosis related group (DRG). The post-operative admission demonstrated 25 patients admitted to the PACU with an average length of stay (LOS) 4.42(±4.46) days and the 62 patients admitted to the ICU average LOS was 8.38(±6.54) days. 38% of the PACU patients were coded with 219 and 33% with 220. The difference in weighed DRG is 2.6274units. The patients who were discharge where the transfer penalty applied had a greater than \$2000.00 loss per procedure.

CONCLUSION Advancement in healthcare comes with a price. In today's healthcare economy institutions continue to balance cost with being able to office the community the latest technology and treatment. This discussion suggests that there is cost saving opportunities however more research is needed to truly understand the impact.

CRT-803
TAVR in Patients with Liver Disease

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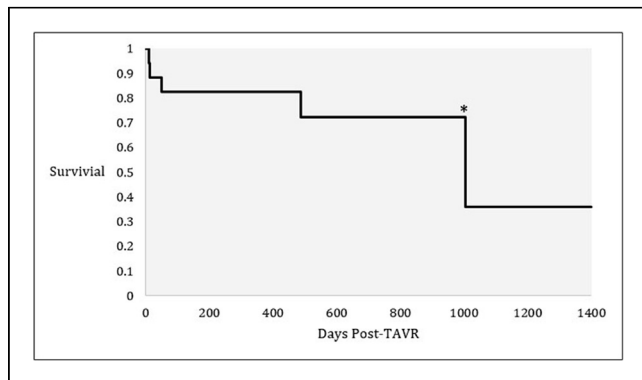
OBJECTIVE Transcatheter Aortic Valve Replacement (TAVR) has emerged as an alternative to high-risk surgery in patients with comorbid conditions. The role of TAVR in patients with liver disease has not been fully examined.

METHODS We examined the procedural and intermediate to long-term follow-up outcomes of patients at our institution with aortic valve stenosis and chronic liver disease, identified by liver biopsy or from a combination of clinical findings. All patients were treated with Sapien or Sapien XT (Edwards Life Sciences, Irvine CA) balloon-expandable transcatheter bioprosthesis between Nov 2007 and Feb 2014.

RESULTS A total of 17 of 706 (2.41%) patients treated with transfemoral (TF) [n=14] or transapical (TA) [n=3] TAVR had liver disease (mean age 77.7±9.1 years, 10 men, mean STS score 8.4, mean MELD score 11.4, Child-Turcotte-Pugh (CTP) Class A [n=11], B [n=6], C [n=0]). Median follow-up was 466 days (range = 12-1403 days). In-hospital mortality was 5.88% and 90-day mortality was 17.65%. Safety and efficacy endpoints as defined by the Valve Academic Research Consortium (VARC) were significant for one perioperative death from a proximate cardiac cause (post-op day 14), one death after hospital discharge of unknown cause (post-op day 12), two deaths from non-cardiac causes (post-op days 50 and 487), and one death of unknown cause (post-op day 1005). There were no life-threatening or major bleeding complications. One patient had a myocardial infarction, one had a transient ischemic attack, and five had transient acute kidney injury.

CONCLUSION TF and TA TAVR are feasible methods in treating aortic stenosis in patients with liver disease. In patients with mild to moderate liver disease there are acceptable early and late complications, however, outcomes in patients with advanced liver disease (MELD > 20 or CTP class C) warrants further study.

Figure 1. Kaplan-Meier Curve of Survival after TAVR



Long term survival of patients with chronic liver disease after TAVR. *Only 2 patients had follow up beyond 1000 days.

CRT-804
Impact of Procedure Access on Early and Late Outcome of Severe Aortic Stenosis Patients Undergoing Transcatheter Aortic Valve Replacement

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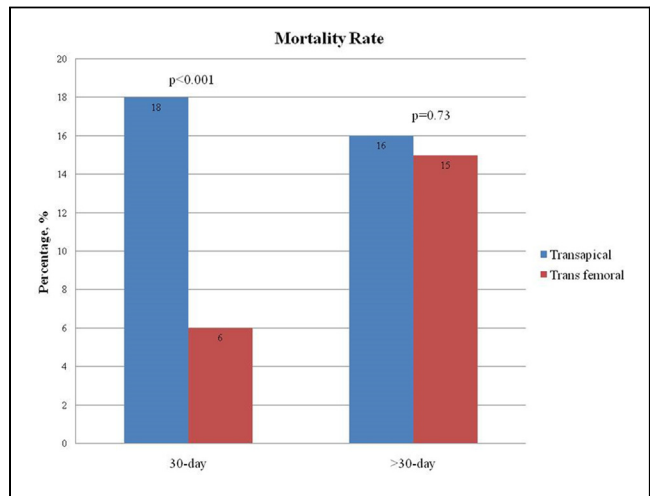
BACKGROUND Studies investigating the impact of procedural access on outcome of severe aortic stenosis (AS) patients undergoing transcatheter aortic valve replacement (TAVR) have shown conflicting results. Our aim was to characterize baseline differences between TAVR patients undergoing via transfemoral (TF) and transapical (TA) approaches, evaluate the risk for peri-procedural complications, and assess the impact of access type on early and late mortality.

METHODS Severe AS patients undergoing TAVR at our institution between May 2007 and July 2014 were included. Baseline demographic, clinical and imaging parameters were compared between TA and TF patients, peri-procedural complications rate were assessed as well as early and late mortality rates.

RESULTS Among 548 severe AS patients undergoing TAVR, TF approach was used in 428 and TA in 120. Main differences between the 2 groups consisted from lower BMI in the TA group along with a higher rate of peripheral vascular disease in comparison with the TF patients. Procedural data indicates shorter fluoroscopy time and smaller contrast volume in the TA group.

Complications rate were significantly higher in the TA group compared with TF group, with higher AKI rates (18% vs. 5%, p<0.001), major bleeding (15% vs. 6%, p=0.002), pleural effusion (23% vs. 4%, p<0.001) and atrial fibrillation (31% vs. 9%, p=0.004). In addition, an increased mortality rate at 30 days was noticed among the TA groups in comparison with TF patients (18% vs. 6%, p<0.001). However, mortality beyond 30 days revealed was similar among both groups (16% vs. 15%, p=0.73).

CONCLUSION TA approach TAVR portends increased risk for serious peri-procedural complications when compared with TF patients. TA patients have higher early mortality in comparison with TF patients; however, mortality rate is similar among patients surviving the procedure.



CRT-805
Long-Term Results: Following Transcatheter Aortic Valve Implantation

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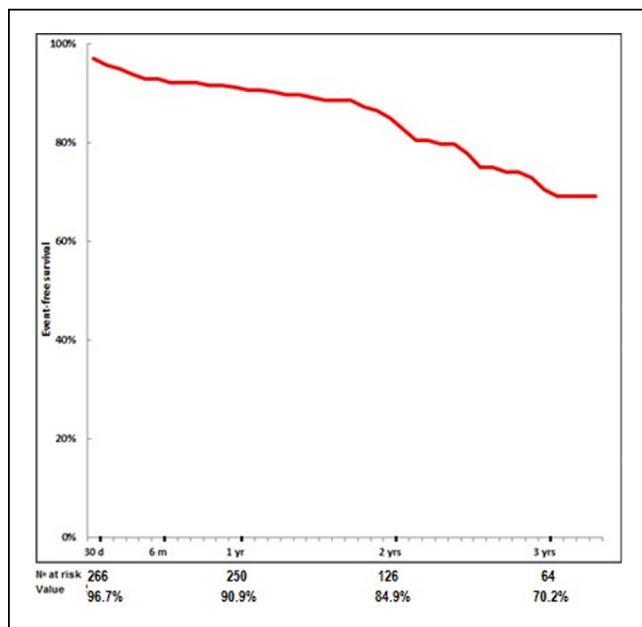
BACKGROUND Transcatheter aortic valve implantation (TAVI) is the contemporary treatment of choice for high/prohibitive surgical risk patients with severe symptomatic aortic stenosis.

METHODS Outcomes of consecutive 275 (61% female) severe aortic stenosis patients, treated with TAVI and followed up to 3 years (mean 702 days), were analyzed and reported according to the Valve Academic Research Consortium 2 definitions. The primary end point was death from any cause.

RESULTS This patient group (60% women) was characterized by advanced age (mean 81.7±6.8), high mean logistic EuroScore = 19.1±12 and STS score = 8.1±5. The

Medtronic-CoreValve® device was utilized in 195 (71%) and the Edwards-Sapien® device in 80 (29%) of patients. The trans-femoral, trans-axillar, trans-apical, trans-aortic and retroperitoneal route were used in 224, 20, 29, 1 and 1 patients; respectively. Procedural success was 97.1%. One month, 1 year, 2 and 3 years survival rates were 97%, 91%, 85% and 70%; respectively. Two patients (0.7%) needed urgent cardiac surgery due to pericardial tamponade. Peri-procedural/in-hospital stroke was diagnosed in 9 (3.2%) patients. Permanent pacemaker was required in 40 (14.5%) patients: (36 cases in CoreValve and 4 in Sapien valves). Significant paravalvular leak (≥moderate) was noted in 22 (8%) patients. After the procedure, mean valve gradients decreased from 51.2±16 to 8.1±7 (p<0.001). Symptomatic improvement was evident during follow up, having 98% of patients in NYHA-FC I or II.

CONCLUSION The current report signifies that catheter-based treatment of mostly elderly patients with severe aortic stenosis is feasible, safe and associated with satisfactory long-term outcomes. This approach has proved itself in 'real life' of TAVI practice as shown by the reported results.



CRT-806
Impact of Body Mass Index on Outcomes of Severe Aortic Stenosis Patients Undergoing Transcatheter Aortic Valve Replacement

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BACKGROUND Obese aortic stenosis patients undergoing surgical replacement have improved survival in comparison with underweight patients. Currently there are scarce data regarding BMI impact on outcome of severe aortic stenosis patients undergoing transcatheter aortic valve replacement (TAVR).

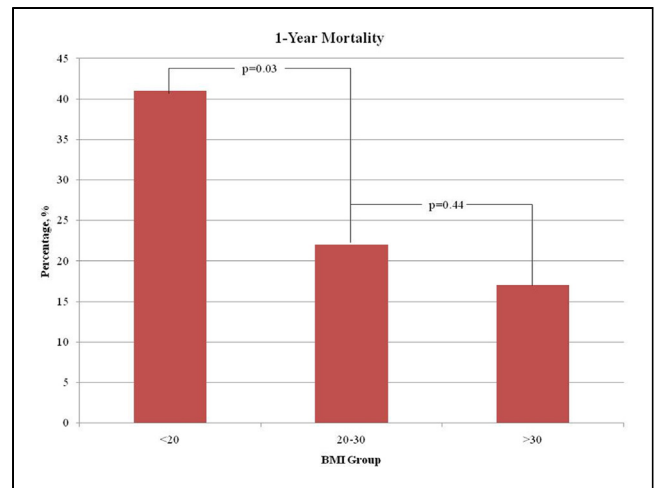
OBJECTIVE Our aim was to assess the impact of BMI on mortality and complications rate of TAVR patients.

METHODS Patient population included all severe AS patients undergoing TAVR at our institution, between May 2007 and July 2014. Baseline demographic, clinical and imaging parameters were compared between 3 patients groups according to BMI (<20, 20-30 and >30), peri-procedural complications rate were assessed and mortality was evaluated by the BMI group.

RESULTS Among 340 severe AS patients undergoing TAVR, 9% (n=29) were underweight with a BMI<20, 64% (n=219) had a BMI of 20-30, and 27% (n=29) were obese with BMI >30.

Patients with BMI 20-30 were older and had higher proportion of men in comparison with under- and overweight patients (85±7 vs. 81±18 and 80±8, p<0.001 and 61 vs. 28 and 35%, p<0.001). Diabetes Mellitus was more prevalent as BMI increased, while the STS score was inversely related to BMI (12±5%, 9±4% and 9±4%, for the underweight, normal weight and obese respectively, p=0.004). Survival comparison has showed increased mortality rates among underweight patients, but no significant difference was noted between the normal and obese patients (graph).

CONCLUSION Underweight severe aortic stenosis patients undergoing TAVR have increased risk for long term mortality in comparison with normal weight or obese patients, however obesity doesn't seem to portend significantly higher survival rates when compared with normal weight TAVR patients.



CRT-807
Prognostic Impact of Improvement in Intra-Operative Pulmonary Artery Systolic Pressure and Left Ventricular Ejection Fraction in Patients Undergoing Trans-Catheter Aortic Valve Replacement

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BACKGROUND Previous studies have demonstrated reduced survival in high risk patients with symptomatic AS undergoing TAVR who had elevated pulmonary artery systolic pressure (PASP) at baseline. However, effects of elevated intra-operative PASP on long term outcomes in these patients are not clearly defined.

METHODS We retrospectively evaluated 100 consecutive patients undergoing TAVR at our institution between 2012 and 2013. Baseline characteristics, 30 day major adverse cardiovascular events (MACE), defined as composite end point of stroke, myocardial infarction, cardiovascular death or re-hospitalization, and 1 year all-cause mortality stratified by intra-operative PASP were analyzed.

RESULTS On cox regression survival analysis in patients undergoing TAVR, being in the highest tertile of intra-operative PASP was an independent predictor of a higher 30 day MACE event rate (HR: 4.1, 95% CI: 1.8 to 9.2, p = 0.001) and long term mortality at 12 month (hazard ratio (HR): 6.6, 95% confidence interval (CI): 3.8 to 11.4, p < 0.001). Following TAVR, patients with greater than 10mmHg reduction in their intra-operative PASP, had improved long term survival at 12 months (HR: 0.14, 95% CI: 0.04 to 0.46, p = 0.001). In addition, an increase of greater than 5% in left ventricular (LV) ejection fraction (EF) after TAVR was also associated with improved long-term survival at 12 months (HR: 0.23, 95% CI: 0.07 to 0.78, p = 0.02).

CONCLUSION In high risk patients with severe aortic stenosis, elevated pulmonary artery systolic pressures during trans-catheter aortic valve replacement was associated with reduced survival at 1 year. Reduction in PASP after TAVR was one of the strongest predictor of survival in our patient population. More large scale randomized studies are needed to further evaluate these results.