ACC.14
TCT@ACC-i2 | innovation in intervention

A1733
JACC April 1, 2014
Volume 63, Issue 12

TCT@ACC-i2: The Interventional Learning Pathway

IMPACT OF MITRAL REGURGITATION ON CLINICAL OUTCOME AFTER TRANSCATHETER AORTIC VALVE IMPLANTATION

Poster Contributions
Hall C
Saturday, March 29, 2014, 10:00 a.m.-10:45 a.m.

Session Title: Valvular and Structural Heart Intervention
Abstract Category: 42. TCT@ACC-i2: Aortic Valve Disease
Presentation Number: 2101-288

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Background: We analyzed the midterm clinical outcome after transcatheter aortic valve implantation (TAVI) using either Edwards Sapien transcatheter heart valve or Medtronic CoreValve ReValving System.

Method: We identified 97 patients with symptomatic severe aortic stenosis (aortic valve area<1.0 cm2, indexed effective orifice area <0.6 cm2/m2) who underwent TAVI using Edwards Sapien valve and Medtronic CoreValve.

Results: There was no difference in 30-day survival between 2 valves (Sapien, 95.3% vs. CoreValve, 94.4%; P = 0.84), combined safety endpoint (Sapien, 93.7% vs. CoreValve, 88.9%; P = 0.46), 1-year cumulative survival rates (Sapien, 95.2% ± 3.3% vs. CoreValve, 90.1 ± 5.2%; P = 0.52) and 1-year cumulative event free rates (Sapien, 87.8% ± 5.2% vs. CoreValve, 80.1% ± 6.9%; log-rank P = 0.60) between 2 valves. Kaplan-Meier analysis showed that pre-procedural mitral regurgitation (MR) ≥ 3+ was associated with reduced survival rate (MR ≤ 2+, 94.3% ± 2.9% vs. MR ≥ 3+, 71.4% ± 17.1%; hazard ratio, 7.05; log-rank P = 0.009) and event free rate (MR ≤ 2+, 84.7% ± 4.4% vs. MR ≥ 3+, 71.4% ± 17.1%; hazard ratio, 3.76; log-rank P = 0.029). Multivariate Cox analysis identified pre-procedural mitral regurgitation ≥ 3+ as an independent predictor of adverse events including death, stroke or rehospitalization (hazard ratio 6.72, 95% confidence interval; 1.68 -26.94, P = 0.007).

Conclusion: Mitral regurgitation ≥ 3+ was identified as an independent predictor of adverse outcome after TAVI including death, stroke and rehospitalization.