ACC.13
62nd Annual Scientific Session & Expo
TCT@ACC-i2

E1907
JACC March 12, 2013
Volume 61, Issue 10

TCT@ACC-i2: Invasive and Interventional Cardiology

AR INDEX POST IMPLANT OF TWO DIFFERENT TRANSCATHETER AORTIC VALVES

Poster Contributions
Poster Sessions, Expo North
Monday, March 11, 2013, 9:45 a.m.-10:30 a.m.

Session Title: Structural Heart Disease Intervention
Abstract Category: 49. TCT@ACC-i2: Aortic Valve Disease
Presentation Number: 2114-247

Authors: *Bernardo Lopez-Sanabria, Brian O'Neill, Sergio Andres Perez, Carlos Alfonso, Luis Miguel Benitez, Claudia Martinez, Pedro Martinez-Clark, Mauricio Cohen, Alan Heldman, William O'Neill, Antonio Dager, Eduardo De Marchena, University of Miami, Miami, FL, USA, Angiografia de Occidente, Cali, Colombia*

Background: Transcatheter Aortic Valve Replacement (TAVR) improves survival in inoperable patients with severe aortic stenosis (AS). Compared to surgical aortic valve replacement (AVR), TAVR is associated with a higher incidence of paravalvular leaks. The aortic regurgitation (AR) index has been shown to be associated to the severity of paravalvular leak and prognosis. Comparisons of AR indices between different transcatheter aortic valves are currently lacking. We present at two-center comparison of AR index between the Medtronic Core Valve and Edwards-Sapien Valve.

Methods: Patients undergoing implantation with the Medtronic Core Valve were recruited in Angiografia de Occidente Cali, Colombia, from March 24, 2008 to September 7, 2012 and patients undergoing implantation with the Edwards-Sapien valve at the University of Miami Hospital Florida, USA from December 1, 2011 to October 15, 2012. The AR index was calculated in all patients after deployment of the valve by subtracting the left ventricular end diastolic pressure from the aortic diastolic pressure and dividing by the systolic pressure.

Results: A total of 64 patients underwent implantation of a Core Valve Prosthesis and 100 patients underwent implantation with an Edwards-Sapien valve. Patients undergoing implantation of Edwards-Sapien valve were significantly older (84.5±6.7 vs. 79 ±6.1 $p<0.001$) and had similar rates of diabetes (38% vs. 31.3% $p=0.38$), hypertension (86% vs. 92% $p=0.38$), prior myocardial infarction (17% vs. 18.8% $p=0.78$) and COPD (36% vs. 45.3% $p=0.24$). The AR index was significantly higher for patients undergoing implantation of Core Valve vs. Edwards Sapien Valve (30.72 ± 10.4 vs. 26.1 ± 9.3 $p=0.004$).

Conclusions: Patients who underwent TAVR with the Medtronic Core Valve tended to have a higher AR index post-TAVR vs. those who underwent TAVR with the Edwards-Sapien Valve. The implications of our findings will need to be further evaluated and correlated with other clinical outcomes and parameters in larger randomized trials directly comparing different percutaneous valve technologies.