Conclusions: CVD is not associated with an increased risk of stroke or death following TAVR. The routine screening of CVD prior to TAVR does not appear justified.

Categories Structural: Valvular Disease: Aortic

Keywords: Carotid stenosis, Stroke, Transcatheter aortic valve replacement

TCT-614 Aortic Root and Anatomical Exclusion for Transcatheter Aortic Valve Implantation

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Background: Patients with severe aortic stenosis who are referred for transcatheter aortic valve replacement (TAVR) need to meet aortic root and aortic annular anatomical inclusion criteria. We sought to characterize the number of patients that could not have the currently available transcatheter valves (Sapien XT and CoreValve).

Methods: We screened 400 patients with severe aortic stenosis who underwent TAVR 2010-2014 and had multiple detector computed tomographic (MDCT) imaging. Anulus measurements of the basal ring (short- and long-axis, area-derived diameter), coronary ostia height, sinus area (SA), sino-tubular junction area (STJ), calcification and eccentricity index (EI, 1-short axis/long axis) were made.

Results: The vast majority of patients were able to be offered a currently available TAVR valve (88%). We identified 49 patients who were excluded for anatomical annular characteristics alone. Large aortic annuli were the most common reason for anatomical exclusion (70% ≤ 79 mm2; n = 39, 80%). In addition these large annuli were more elliptical (EI, 1.39 ± 0.1) with more eccentric calcification (68%). The presence of low coronary heights (n = 6 mm: n = 19, 18%) from the aortic annular plane was the next most common reason. The left main coronary artery was more commonly lower than the right coronary artery and low coronary heights with effaced coronary sinuses appeared to occur together (n = 11, 57%). Small aortic annuli were the least common (290 ± 50 mm2; n = 1, 2%) for cause exclusion from TAVR therapy. None of the patients who were excluded form TAVR therapy had more than one annular reason for TAVR exclusion.

Conclusions: Most patients with severe aortic stenosis who are referred for TAVR can be offered a transcatheter valve. However, 12% of patients cannot be offered a therapy due to anatomical exclusion criteria. This was primarily due to the presence of large aortic annuli and low coronary heights.

Categories Structural: Valvular Disease: Aortic

Keywords: Aortic stenosis, TAVR

TCT-615 First Report of Three-Year Outcomes With the Repositionable and Fully Retrievable Lotus Aortic Valve Replacement System: Results From the REPRISE I Feasibility Study

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Background: The repositionable, fully retrievable, CE-marked Lotus Valve is designed to facilitate controlled, precise positioning and minimize paravalvular aortic regurgitation. Results to 3 years post-implantation with Lotus have not yet been reported.

Methods: REPRISE I is a prospective, single-arm, 3-center feasibility study designed to assess acute safety and performance of the 23mm Lotus Valve in symptomatic patients with calcified aortic stenosis who were considered high surgical risk by the Heart Team.

Results: The Lotus Valve was implanted in 11 female patients with a mean age 83.0 ± 3.6 years and a mean STS score 4.9 ± 2.5%. Frazil measures included gait speed ≥ 65 (9/11), grip strength ≥ 18kg (7/11), and cognitive dysfunction (5/11); defined as a score ≤ 4 on the