Conclusions: Residual regurgitation remains a limitation of the early generations of aortic prostheses and is associated with increased mortality. Thus newer devices have been developed to address this complication. The aim of this study was to assess performance of second generation Sapien XT (SXT) vs. the third generation Sapien 3 (S3) in patients with severe aortic stenosis (AS) undergoing transfemoral aortic valve implantation (TAVI).

Methods: We analyzed a total of 413 patients undergoing implantation of balloon-expandable Sapien prosthesis in our institution treated whether with SXT (n=354) or the S3 (n=59). Outcomes were defined according to the standardized Valve Academic Research Consortium-2 criteria (VARG-2).

Results: Mean age of the TAVI patients was 80.7±7.6 years, 55% of them were women and median prosthesis size was 26mm. No differences regarding the baseline characteristics were observed among both groups. Balloon post-dilatation was performed more frequently after implantation of the SXT than S3 prosthesis (30.8% vs. 8.4% p<0.01). The incidence of relevant post-procedural regurgitation directly after procedure and of device failure was significantly higher among SXT group (Figure).

Conclusions: The third generation balloon-expandable Sapien 3 is safer and more feasible compared to the second generation Sapien XT valve system.

TCT-712

Better Outcomes with Sapien 3 vs Sapien XT balloon-expandable prosthesis in patients undergoing transfemoral aortic valve replacement

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Background: Transcatheter aortic valve implantation (TAVI in patients with large aortic annuli (>26mm) can be challenging and may be associated with suboptimal results, particularly as regards to post-procedural aortic regurgitation (AR). Recently, Direct Flow Medical (DFM) introduced the 29mm version of their fully repositionable and retrievable valve to treat aortic annuli measuring 26 to 28.5mm. Methods: All consecutive patients successfully implanted with a 29mm DFM valve between December 2013 and May 2014 were retrospectively analyzed in this multicenter European study. Endpoints were defined according to VARG-2 criteria peri-procedurally and at 30 days.

Results: A total of 36 high- and extreme-risk patients with severe aortic stenosis were implanted with a 29mm DFM valve. The mean age of patients was 82±4.6 years and 90% were males. The average annular diameter and perimeter were 27.4±1.2mm and 86.8±3.4mm, respectively. The 29mm DFM was oversized in relation to the native annulus by 4.9±3.9% by diameter and 5.0%±4.0% by perimeter. Implantation of the 29mm DFM resulted in a reduction of mean transaortic gradient from 41.9±15.8mmHg to 6.1±5.1mmHg. Device success was achieved in 97% of patients. Implantation of a DFM valve was associated with none or trivial AR in 81%, mild AR in 17%, and moderate AR in 1 (2%) patient. There were no coronary occlusions, device embolizations, annular rupture or intraprocedural deaths. Complete 30-day outcomes will be available and presented at the meeting.

Conclusions: The Direct Flow Medical Transcatheter Aortic Valve System was associated with excellent peri-procedural outcomes and virtually eliminated AR in patients with aortic stenosis and a large annulus.

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The double-edged sword of antiplatelet treatment following transcatheter aortic valve implantation - a collaborative patient level pooled analysis

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Background: Evidence is lacking to support decision making on antiplatelet therapy following transcatheter aortic valve implantation (TAVI).

Methods: All available studies comparing single with dual antiplatelet treatment following transcatheter aortic valve implantation (TAVI) were included in a collaborative patient level pooled analysis. The principal investigator for each trial was approached. Primary endpoint was defined as the composite of major adverse cerebrovascular and cardiovascular events (MACCE) at one month, including all-cause mortality, acute coronary syndrome (ACS), stroke, life threatening or major bleeding.

Conclusions: The third generation balloon-expandable Sapien 3 is safer and more feasible compared to the second generation Sapien XT valve system.