

Gender differences in clinical presentation and outcome of transcatheter aortic valve implantation

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Severe aortic stenosis (AS) is increasing in frequency as the population ages. For a subset of patients in whom surgical conventional aortic valve replacement is excluded due to severe co-morbidities, an alternative to surgical aortic valve replacement – transcatheter aortic valve replacement (TAVI)- has emerged with a first-in-man case performed in France in 2002 by Pr. Alain Cribier. Since 2002, TAVI has undergone many modifications from first generation devices, and the technique is now performed routinely in selected centres to treat patients with symptomatic severe aortic stenosis who are ineligible or at high-risk for conventional surgical aortic valve replacement. Two transcatheter heart valves, the "Edwards Sapien valve" and the Medtronic Corevalve" are available in Europe. More than 30,000 procedures have been performed worldwide in the last decade.

Although gender differences in cardiovascular disease (CVD) have been explored for a long time, only a limited number of studies have been conducted to clarify differences between male and female patients with aortic stenosis (AS), in terms of clinical presentation and outcome, after surgical [aortic valve replacement](#) (AVR). Certain studies have shown an increased short-term mortality rate among women and the female gender has been identified as one of the predictors of peri-operative mortality after cardiac surgery by EuroSCORE.

The Institut Cardiovasculaire Paris-Sud (ICPS) started a TAVI program

in September 2006. In order to address the issue of gender differences in clinical presentation and outcome of TAVI for [severe aortic stenosis](#), clinical characteristics and outcome of 131 women and 129 men treated in ICPS from 2006 to december 2010, were compared. Data were collected prospectively and entered in a dedicated database.

The Edwards valve (85.4%) and Corevalve (14.6%) were used via the transfemoral (65.0%), transapical (31.9%), or subclavian (3.1%) approach. Interestingly, we found that women and men had a similar age at the time of TAVI (83.1 \pm 6.3 y-o), but women were characterized by less coronary and peripheral disease, less previous cardiac surgery, higher ejection fraction and a lower Euroscore (22.3 \pm 9.0 vs. 26.2 \pm 13.0%, p=0.005). Indeed, minimal femoral size (7.74 \pm 1.03 vs 8.55 \pm 1.34mm, p

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