

Results differ between transaortic and open surgical aortic valve replacement in women

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Abstract

BACKGROUND:

Despite the well-known impact of female sex on outcome after surgical aortic valve replacement (sAVR), few studies investigated its role after transcatheter aortic valve replacement (TAVR).

METHODS:

After propensity-matching for age, baseline comorbidities, previous interventions, priority, frailty score, New York Heart Association class, left ventricular function and associated cardiac diseases, hospital mortality, and procedure-related morbidities of 388 women (194 TAVR versus 194 sAVR)-of 5,231 patients enrolled in 70 centers participating in this prospective multicenter national registry-were analyzed at a central management unit of the Italian National Institute of Health.

RESULTS:

Although hospital mortality was comparable (4.1% TAVR versus 3.1% sAVR; $p = 0.177$), women undergoing sAVR showed a higher rate of transfusion (63.9% versus 37.1% TAVR; $p = 0.0001$); higher number of transfusions per patient (3.6 ± 0.4 versus 2.3 ± 0.3 TAVR; $p = 0.049$); a higher incidence of low cardiac output state (5.7% versus 3.6% TAVR; $p = 0.017$) and acute renal failure (8.8% versus 4.1% TAVR; $p = 0.01$); and higher mean transprosthetic gradients (15.7 ± 12.6 mm Hg versus 11.9 ± 10.7 mm Hg TAVR; $p = 0.004$). In contrast, women undergoing TAVR experienced significant postprocedural aortic regurgitation (mild, 37.6% versus 7.7% sAVR; moderate-to-severe, 7.1% versus 1.5% sAVR; $p = 0.0001$) and a higher rate of stroke (7.7% versus 2.5% sAVR; $p = 0.037$), major vascular complications (9.3% versus 0.5% sAVR; $p = 0.0001$), pacemaker implantation (12.4% versus 6.2% sAVR; $p = 0.004$), need for emergent percutaneous coronary intervention (1.0% versus 0% sAVR; $p = 0.007$), and longer intermediate care unit length of stay (2.5 ± 4.4 days versus 1.4 ± 2.6 days sAVR; $p = 0.008$). Perioperative myocardial infarction and lengths of intensive care unit stay and hospitalization were comparable (not significant).

CONCLUSIONS:

Women undergoing sAVR and TAVR experienced different peri-procedural morbidities. These data strongly suggest the need to strictly individualize the indications.