

Clinical Profile and Outcomes of Patients with Severe Aortic Stenosis at High Surgical Risk: Evaluation According to Treatment Assignment.

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Background: Many patients with severe symptomatic aortic-valve stenosis (AS) are considered high surgical risk and therefore are either treated conservatively or undergo balloon valvuloplasty (BV). Some of them may benefit from transcatheter aortic-valve implantation (TAVI). The aim of the study was to evaluate the clinical profile and outcome of high-risk patients with severe AS according to type of treatment assigned.

Methods: A prospective observational design was used. Potential candidates for TAVI attending a tertiary medical center from July 2008 to October 2009 were evaluated by clinical and laboratory parameters and assigned for treatment accordingly. Test results and patient outcomes were compared.

Results: The study group consisted of 102 patients, 42.4% male, of mean age 82.2 ± 8 years. NYHA class III/IV was documented in 96%. Mean valve area measured 0.63 ± 0.19 cm², and maximum/mean gradients, $61.2 \pm 35.4/38 \pm 22.6$ mmHg. Mean Logistic EuroSCORE (LES) was $26\% \pm 16\%$, and mean Society of Thoracic Surgery (STS) risk score, $8.7\% \pm 4.5\%$. Rates of significant co-morbidities were high: ischemic heart disease 72%, previous sternotomy 30.8%, renal failure 49.4%, COPD 24.4%. Eleven patients were treated surgically with aortic valve replacement (AVR; LES, $21.4\% \pm 16.2\%$; STS, $8.1\% \pm 3.7\%$). Seventeen patients underwent BV (LES, $30.2\% \pm 21.6\%$; STS, $10 \pm 6.6\%$). Eleven patients underwent transfemoral TAVI (4 Edwards-Sapien valve, 7 CoreValve) (LES, $17.9\% \pm 6.8\%$; STS, $8.1\% \pm 3.2\%$). Average follow-up was 172 days (7-505 days). The respective 30- and 180-day all-cause mortality rates were as follows: conservative treatment, 4% and 13.8%; AVR, 8.2% and 44%; BV, 9.1% and 26.7; TAVI, 0% for both.

Conclusions: Our preliminary experience shows that many patients with severe symptomatic AS are ineligible for TAVI. According to our small series high risk patients have an excellent outcome after TAVI. Whereas those excluded from TAVI have a worse outcome regardless of the alternative treatment selected.