

## **Severe Aortic Stenosis Patients at High Surgical Risk: Outcomes According to Treatment Assignment**

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**Background:** Any 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 these patients according to the 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 2010 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 316 patients, 42.8% male, of mean age  $82.2 \pm 6$  years. NYHA class III/IV was documented in 91%. Mean valve area measured  $0.63 \pm 0.18$  cm<sup>2</sup>, and maximum/mean gradients,  $62.1 \pm 35.3/38.4 \pm 23.1$  mmHg. Rates of significant co-morbidities were high: ischemic heart disease 72%, previous sternotomy 30.8%, renal failure 49.4%, COPD 24.4%. Sixty-seven patients underwent TAVI (32 transfemoral Corevalve; 7 transaxillary CoreValve; 14 transfemoral Edwards and 14 transapical Edwards); 33 patients were treated surgically with aortic valve replacement; 32 patients underwent BV. Average follow-up was 232 days (4-828 days). The respective 30- and 180-day all-cause mortality rates were as follows: conservative treatment, 4% and 19.2%; TAVI, 3% and 8.6%; AVR, 14.3% and 25%; BV, 9.4% and 31.3%.

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