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Asia-Pacific Hotlines at TCT 2015: evaluation of initial surgical versus conservative strategies in patients with asymptomatic severe aortic stenosis (The CURRENT AS registry)

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What was your rationale for this study and what was known before?

Surgical aortic valve replacement (AVR) is strongly recommended in symptomatic patients with severe aortic stenosis (AS) who are suitable candidates for surgery. However, the management of asymptomatic patients with severe AS remains controversial. A strategy of watchful waiting is generally recommended other than in several subgroups of patients, for example those with left ventricular dysfunction or very severe AS. However, this recommendation was based on previous small, single-centre studies evaluating symptoms and/or AVR, but not mortality as outcome measures.

What is unique about this study in your country?

To the best of our knowledge this is the first large-scale multicentre study comparing the long-term outcome of the initial AVR strategy versus the conservative strategy following the diagnosis of asymptomatic severe AS.

Did you experience any unexpected challenges?

The CURRENT AS registry is a multicentre, retrospective registry which enrolled 3,815 consecutive patients with severe AS (peak aortic jet velocity >4.0 m/s, or mean aortic pressure gradient >40 mmHg, or aortic valve area <1.0 cm^2) between January 2003 and December 2011[1]. Among 1,808 asymptomatic patients, the initial AVR strategy was chosen in 291 patients and the conservative strategy in 1,517 patients. The median duration of follow-up was 1,361 days with a 90% follow-up rate at two years. The propensity score-matched cohort of 582 patients (initial AVR group: 291 patients, conservative group: 291 patients) constituted the main analysis set for the current report. The primary outcome measures for the current analysis were all-cause death and heart failure (HF) hospitalisation.

Baseline characteristics of the two groups in the propensity score-matched cohort were largely comparable, except for the slightly younger age and greater AS severity in the initial AVR group. In the conservative group, AVR was performed in 41% of patients during follow-up. The cumulative five-year incidences of all-cause death and heart failure hospitalisation were significantly lower in the initial AVR group than in the conservative group (15.4% versus 26.4%, p=0.009, and 3.8% versus 19.9%, p<0.001, respectively). The results from the multivariable Cox models in the entire cohort were consistent with those from the propensity score-matched analysis. Among 492 patients with emerging symptoms related to AS during follow-up in the conservative group, AVR was performed in 239 patients (49%) with a median interval of 70 (IQR: 41-131) days after onset of symptoms. AVR was less frequently performed in patients who presented with NYHA Class III or IV than in those who presented with NYHA Class II (37% versus 63%). The mortality of patients who did not undergo AVR despite their symptoms was very high.

How does the conclusion apply to your daily practice?

The long-term outcome of asymptomatic patients with severe AS might be substantially improved by employing an initial AVR strategy since, in real-world clinical practice, when managed conservatively, outcomes are dismal.

Conflict of interest statement

The authors have no conflicts of interest to declare.

Reference

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