Abstract: 6098

The role of diastolic function in risk stratification of patients with moderate aortic stenosis

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Topic(s):
Valvular Heart Disease – Epidemiology, Prognosis, Outcome

Citation:
Background: Currently data on the risk stratification of patients with moderate aortic stenosis (AS) are very limited.

Method: Patients diagnosed with moderate AS in 2012 (aortic valve area [AVA]: >1 and =1.5cm²) were identified. Patients were stratifying by LV diastolic function (normal vs high filling pressure), left ventricular ejection fraction (LVEF =50 vs <50 %) and stroke volume index (SVI =35 vs <35 ml/m²). High filling pressure was defined as average E/e’ =14 or septal E/e’ =11 when atrial fibrillation was present. The prognosis was compared to age- and sex-matched general population.

Results: 898 patients were included (age 74 years, 58% male, AVA 1.25 cm²). During a median follow-up of 2.9 years, there were 346 deaths. In patients with moderate AS, mortality was higher than expected (P<0.001, Fig 1A). LV high filling pressure, LVEF<50% and SVI<35ml/m² were present in 416 (55%), 140 (17%) and 81 (9%) patients, respectively. Those with normal filling pressure had similar prognosis when compared to controls (Fig 1C, P=0.35); whereas mortality rates remained higher than reference even when LVEF=50% or SVI=35ml/m² (Fig 1E, 1G, P<0.001). Amongst all groups, mortality rates were the highest in patients with LVEF <50% or SVI <35 ml/m² (Fig 1D, 1F, P<0.001); mortality ratios were 3.78 (95% CI 3.01-4.67) and 6.91 (95% CI 5.13-9.11), respectively. Noteworthy, high filling pressure allowed further risk stratification when LVEF or SVI was preserved (Fig 2, P<0.001).

Conclusions: Patients with moderate AS showed poor survival. A clinical trial examining role of aortic valve replacement would be beneficial not only in patients with reduced LVEF or SVI but also in those with high LV filling pressures.
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