HIGH SENSITIVE TROПONIN PREDICTS LONG-TERM PROGNOSIS IN PATIENTS WITH AORTIC STENOSIS

Poster Contributions
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Background: Cardiac troponins are excellent prognostic markers in patients with stable coronary disease and heart failure, but its role in aortic stenosis is unknown. We investigated whether baseline high sensitive troponin I (hsTnI) is associated with severity and outcome in patients with aortic stenosis.

Methods: We measured baseline serum hsTnI in 131 patients with moderate aortic stenosis. Patients were grouped into tertiles based on hsTnI and underwent annual echocardiography and computed tomography. The primary outcome was a composite of valve replacement or cardiovascular death at 5 yrs.

Results: hsTnI concentrations were quantifiable (median = 7.7 pg/mL [IQR 5.7-13.2]) in all patients. Patients in the highest tertile were older (64 vs 70 yrs, tertile 1 versus tertile 2, p = 0.03) and had greater left ventricular mass (327 vs. 392, p=0.017), but there were no differences in coronary calcium scores or aortic valve velocity, gradient or area. Serum hsTnI concentrations predicted the need for valve replacement or cardiovascular death (HR = 2.47, 95% CI 1.43 - 4.26) following adjustment for age, sex, symptoms or valve area (Fig 1).

Conclusion: In patients with aortic stenosis, hsTnI concentrations are an independent predictor for valve replacement and cardiovascular death. Troponin concentration is associated with ventricular hypertrophy rather than severity of valvular stenosis suggesting that the myocardial response to aortic stenosis appears to be an important predictor of clinical outcome.

Figure 1: Event free survival for composite endpoint of valve replacement and/or cardiovascular death at 5 years according to tertiles of troponin I