



Valvular Heart Disease

LEFT ATRIAL SIZE AND FUNCTION AS PREDICTOR FOR NEW-ONSET OF ATRIAL FIBRILLATION IN PATIENTS WITH ASYMPTOMATIC AORTIC STENOSIS. THE SIMVASTATIN IN AORTIC STENOSIS STUDY

ACC Moderated Poster Contributions

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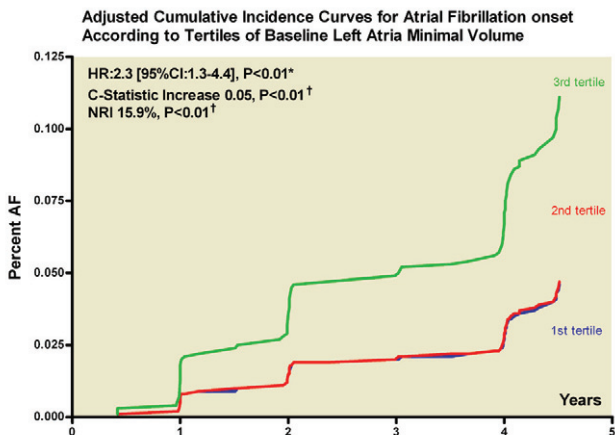
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Background: Left atrial (LA) size and function changes with chronically increased filling pressure of left ventricle (LV). It remains unclear whether these parameters can predict new-onset atrial fibrillation (AF) in patients with asymptomatic aortic stenosis (AS).

Methods: From the Simvastatin Ezetimibe in Aortic Stenosis study 1,134 patients with asymptomatic mild to moderate AS (transaortic Doppler velocity 2.5 and 4.0 m/sec), preserved LV (EF) and no previous AF were included. Peak-aortic velocity, LAm_{ax} & LAmin volume was measured by echocardiography. LA conduit (LAcon) volume was defined as LV stroke volume - LA stroke volume. The LA function was expressed as LA-EF, defined as LAm_{ax} - LAmin volume / LAm_{ax}. LV mass, LAm_{ax} and LAmin volume were indexed by body surface area.

Results: New-onset AF occurred in 69 patients within a mean follow-up of 4.2±0.9years. Mean age was 66±9.7years, aortic valve area index 0.6±0.2cm²/ m², LV mass 99.2±29.7g/m², LAm_{ax} volume 34.6±12.0mL/m², LAmin volume 17.9±9.3mL/m², LA-EF 50±15% and LAcon volume was 45±21mL/m². Baseline LAmin volume predicted new-onset AF in Cox multivariable analysis (HR:2.3 [95%CI:1.3-4.4], P<0.01), and added prognostic information of AF beyond conventional risk factors (p<0.01). By comparison of C-index LAmin volume was superior to all LA measurements.

Conclusion: LAmin volume independently predicted new-onset AF in patients with asymptomatic AS and was superior to LA-EF, LAcon and LAm_{ax} volumes and conventional risk factors.



CI, Confidence Interval; HR, Hazard Ratio; NRI, Net Reclassification Improvement

* Adjusted for significant baseline characteristics

† Compared to significant conventional factors.