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Heart Failure

IMPACT OF HEART FAILURE WITH PRESERVED EJECTION FRACTION ON THE OCCURENCE OF ISCHEMIC STROKE IN PATIENTS WITH ATRIAL FIBRILLATION

ACC Moderated Poster Contributions
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Background: The prognostic value of heart failure with preserved ejection fraction (HFPEF) in patients with atrial fibrillation (AF) is not well-defined. We sought to examine the risk of stroke in patients with HFPEF and nonvalvular AF.

Methods: Clinical and echocardiographic data from Jul. 2007 to Dec. 2008 in patients with nonvalvular AF who were not on anticoagulation were investigated. Patients with left ventricular ejection fraction <50%, severe valvular or pericardial disease, recent stroke or transient ischemic attack, recent acute coronary syndrome or revascularization, severe pulmonary disease, or terminal illness were excluded in the analysis. Among a total of 406 patients, 304 patients had nonvalvular AF without heart failure (HF) and 102 patients were diagnosed as nonvalvular AF with HFPEF. We compared the rate of ischemic stroke, death, and composite of ischemic stroke and death between two groups.

Results: Patients with HFPEF were older than those without HF (71.6 vs. 64.0 years, $P<0.001$). Female sex, diabetes mellitus, hypertension, chronic kidney disease, angina, history of myocardial infarction, use of beta blocker and use of digoxin were more common in patients with HFPEF. B-type natriuretic peptide was higher in patients with HFPEF than those without HF (median: 334 vs. 123 pg/ml, $P<0.001$). With a median follow-up of 2.8 years, the rate of ischemic stroke was significantly higher in patients with HFPEF than those without HF (20.6% vs. 6.7% at 3 years for AF with HFPEF vs. AF without HF, $P<0.001$). The rate of death was higher in patients with HFPEF (27.2 vs. 2.0% at 3 years, $P<0.001$). The rate of composite of ischemic stroke and death was also higher in patients with HFPEF than those without HF (41.2 vs. 8.1% at 3 years, $P<0.001$). Adjusted hazard ratio of HFPEF for ischemic stroke, death, and composite of ischemic stroke and death were 3.15 (95% confidence interval [CI] 1.53-6.47, $P=0.002$), 6.60 (95% CI 2.73-15.96, $P<0.001$), and 4.71 (95% CI 2.66-8.33, $P<0.001$).

Conclusion: HFPEF is associated with the increased risk of stroke and death in patients with nonvalvular AF who are not treated with anticoagulation.