H-FABP is novel marker of cardiac damage, remodeling

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MedWire News: A biomarker of acute myocardial infarction may also be useful for predicting cardiac remodeling and clinical outcomes in hypertensive patients with aortic valve disease.

Researchers, led by Masato Iida (Mitsubishi Nagoya Hospital, Nagoya, Japan), studied the value of heart-type fatty acid-binding protein (H-FABP), a cytosolic protein that is abundantly expressed in cardiac myocytes and is an early marker of myocardial damage.

They sought to clarify the association between plasma levels of H-FABP and left ventricular remodeling in patients with hypertension and mild-to-moderate aortic valve disease.

They enrolled 78 hypertensive patients with aortic regurgitation (AR), 73 with aortic stenosis (AS), and 60 without valvular heart disease (HT).

H-FABP levels were significantly higher in patients with AR and AS compared with HT, at 4.9, 4.5, and 3.4 ng/ml, respectively, Iida and team report in the *Journal of Human Hypertension*.

Of note, H-FABP levels positively correlated with left ventricular dimension at systole corrected for body surface area in patients with AR, and with relative wall thickness in patients with AS. These correlations remained statistically significant after adjustment for age, gender, and other variables.

During a median follow-up of 34 months there were 46 cardiac events. In multivariate analysis, H-FABP was an independent predictor of clinical outcomes in both AR (relative risk [RR]=7.61) and AS (RR=13.6) patients.

Iida *et al* say their study supports H-FABP as a sensitive marker of myocardial injury and speculate that leakage of this protein is associated with left ventricular remodeling and/or morphological changes in overloaded hearts.

They also remark that the finding of elevated H-FABP levels in AR/AS patients suggests that these diseases may be less benign than traditionally perceived.

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