

Six-minute walk test predictive for pulmonary hypertension

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The six-minute walk stress echocardiography test is prognostic for development of pulmonary hypertension in connective tissue disease, according to a study published in the July 28 issue of the *Journal of the American College of Cardiology*.

(HealthDay)—The six-minute walk (6MW) stress echocardiography test is prognostic for development of pulmonary hypertension (PH) in connective tissue disease (CTD), according to a study published in the July 28 issue of the *Journal of the American College of Cardiology*.

Kenya Kusunose, M.D., Ph.D., from the Tokushima University Hospital in Japan, and colleagues performed 6MW stress echocardiographic studies in 78 CTD patients at baseline and follow-up. For five years, patients underwent annual echocardiographic follow-up studies.

The researchers found that 16 patients reached the clinical end point of PH development and none died during a median follow-up period of 32

months. In all 16 patients, PH was confirmed by right heart catheterization. Correlations were seen for development of PH with 6MW distance (hazard ratio [HR], 0.99; P = 0.010), early diastolic tricuspid annulus motion velocity (HR, 0.79; P = 0.025), and absolute difference in mean pulmonary artery pressure (Δ mPAP)/absolute difference in cardiac output (Δ Q) (HR, 1.10; P = 0.005). A model on the basis of 6MW distance was improved by Δ mPAP/ Δ Q (chi-square: 6.6 to 14.4; P = 0.019). The best cutoff value of Δ mPAP/ Δ Q for predicting PH development was >3.3 mm Hg/l/min.

"The 6MW stress echocardiography noninvasively provides an incremental prognostic value of PH development in CTD," the authors write. "Larger multicenter studies are warranted to confirm the result."

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