Update in Cardiology

Peter H. Stone, MD
Co-Director, Samuel A. Levine, Cardiac Unit, Director, Clinical Trials Center Cardiovascular Division, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA

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CONGESTIVE HEART FAILURE

Discriminating between cardiac and pulmonary dysfunction in the general population with dyspnea by plasma pro-B-type natriuretic peptide


Aim
Natriuretic peptides are useful markers in ruling out acute cardiac dyspnea in the emergency department, but their diagnostic significance in evaluating chronic dyspnea in the general populations is unknown. This study was designed to determine whether measurement of plasma pro-B-type natriuretic peptide (proBNP) could be used to discriminate between cardiac and pulmonary dyspnea in the general population.

Methods
Within the Copenhagen City Heart Study, a large, community-based population study, dyspnea was evaluated by spirometry, oxygen saturation, echocardiography, and plasma proBNP.

Results
Of 2,929 participants, 959 reported dyspnea. The plasma proBNP concentration was higher in the group with dyspnea (mean, 17.8 pmol/l [CI, 16.3 to 19.4 pmol/l]) than in the group without dyspnea (10.6 pmol/l [CI, 10.0 to 11.4 pmol/l]; P

Conclusions
In the general population with dyspnea, plasma proBNP concentrations are increased in left ventricular dilatation, hypertrophy, systolic dysfunction, or diastolic dysfunction but are unaffected by pulmonary dysfunction.

Impact on Internal Medicine
This study indicates that a simple proBNP biomarker measurement is helpful in distinguishing between cardiac versus pulmonary causes of dyspnea in a large-scale general population.

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