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 **CARDIAC FUNCTION AND HEART FAILURE****ASYMPTOMATIC LEFT VENTRICULAR DIASTOLIC DYSFUNCTION IN A HIGH-RISK POPULATION ENROLLED IN A PRIMARY CARE SETTING: PREVALENCE AND SCREENING VALUE OF ELECTROCARDIOGRAPHY AND NATRIURETIC PEPTIDES: THE DAVID-BERG STUDY**

ACC Poster Contributions

Ernest N. Morial Convention Center, Hall F

Tuesday, April 05, 2011, 9:30 a.m.-10:45 a.m.

Session Title: Heart Failure Disease Management

Abstract Category: 24. Myocardial Function/Heart Failure—Clinical Nonpharmacological Treatment

Session-Poster Board Number: 1160-27

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Background: Prevalence of asymptomatic left ventricular diastolic dysfunction (ALVDD) in the general population and the best screening strategies remain poorly defined. Among 13,625 subjects, we assessed ALVDD prevalence and predictive role of NT-proBNP and ECG abnormalities in patients > 55 and < 80 years (n = 4,047: 2,004 men and 2,043 women) at high cardiovascular risk enrolled at 3 general medicine group practices.

Methods: Patients with hypertension and/or diabetes and/or overt cardiac or cerebrovascular disease, without history/signs or symptoms of heart failure, underwent clinical visit, 12-lead ECG, cardiac EchoDoppler with a portable echo by a cardiologist and point of care NT-proBNP assay. Patients with atrial fibrillation, pacemaker, severe valvular heart disease, a LVEF ≤ 45% or LVend diastolic volume ≥ 97 ml/sm were excluded. ALVDD was defined as a EE' >15 .

Results: Among 544 high risk subjects (mean age 69±7 years, 45% women), 70 (12.9%) showed diastolic dysfunction. In the ALVDD group we observed a higher prevalence of female (64% vs 42%, p<0.001), higher systolic blood pressure (159±26 vs 151±23 mm Hg; p=0.008) and NT-proBNP levels (441±572 vs 232± 243 pg/ml; p=0.005). No ECG variable was significantly associated to ALVDD. By multivariable logistic regression analysis, male gender (OR 0.388 [95% CI 0.221-0.682] systolic blood pressure (OR per each mmHg increase 1.011 [95% CI 1.002-1.023] and NT-proBNP value (OR 1.001 [95% CI 1.00-1.001] per each pg/ml increase) were independently associated to ALVDD. The best NTproBNP cut-off was > 120 pg/ml with an OR for ALVDD of 1.836 [95% CI 1.213-2.779]. The negative prognostic value for ALVDD detection of a ≤120 pg/ml NTproBNP cut-off was 92.9% in the overall population, 95.4% in men, 88.9% in women, 95.1% in patients ≤70 years and 88.2% in those > 70 years.

Conclusions: In a high risk population enrolled in a general practice setting, despite the use of a restrictive criterion for diastolic dysfunction, we detected a high prevalence of ALVDD. A NT-proBNP cut-off value of 120 pg/ml rules out ALVDD with a good negative predictive value, independently of age and gender; ECG demonstrated a low diagnostic performance.