P-370
CHANGES IN SYSTOLIC BUT NOT DIASTOLIC BLOOD PRESSURE IN RESPONSE TO ANTIHYPERTENSIVE THERAPY PREDICT REGRESSION OF LEFT VENTRICULAR MASS INDEX
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The aim of this study was to evaluate the correlation between the reduction in blood pressure (BP) and left ventricular mass index (LVMI) in response to antihypertensive therapy in mild to moderate hypertensive black patients with concentric left ventricular hypertrophy (LVH).

24-Hour ambulatory blood pressure (ABP) profiles and echoangiographic LVMI were available in 47 patients, with left ventricular hypertrophy (LVH), mean age (53±9 years), at baseline and after 5 months of treatment with the a combination of angiotensin II receptor blocker candesartan (8-16 mg o.d.) alone or in combination with hydrochlorothiazide and the ACE inhibitor ramipril, as necessary to control blood pressure.

24-Hour systolic/diastolic ABP showed a profound decline from 153±17 / 95±6 mmHg to 135±20 / 83±10 mmHg (p<0.0001). LVMI regressed from 122±20 g/m2 to 111±23 g/m2 (p<0.01) and relative wall thickness (RWT) declined from 0.51±0.10 to 0.43±0.10 (p<0.0001). A regression model that included gender showed a significant correlation between the reduction in LVMI and systolic ABP: multiple correlation coefficient r=0.46, p=0.0006; r=0.46, p=0.0006 and r=0.44, p=0.0009, for daytime, 24-hours and nighttime periods respectively.

The marked LVMI regression in response to antihypertensive therapy was significantly predicted by profound changes in systolic but not diastolic ABP profiles. Furthermore, this was associated with reversal of the concentric left ventricular remodeling.

Key Words: Angiotensin II Receptor Blocker, Left Ventricular Mass Regression, Left Ventricular Hypertrophy

P-371
GATED SPECT UNDERESTIMATES LEFT VENTRICULAR FUNCTION IN SOME SUBJECTS WITH LEFT VENTRICULAR HYPERTROPHY
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Left ventricular (LV) systolic function is an important prognostic factor in subjects with left ventricular hypertrophy (LVH). The accuracy of gated single photon emission computed tomography (gated SPECT) myocardial perfusion imaging in assessing LV function in subjects with LVH is not established.

We compared LV ejection fraction as determined by gated SPECT myocardial perfusion imaging and by echocardiography in 61 subjects with LVH. LVH was determined by myocardial perfusion imaging.

The mean age of study participants was 64 years; 54% were men. LV function determined by gated SPECT correlated relatively well with that assessed by echocardiography, with perfect agreement observed in 61% of the subjects. However, gated SPECT underestimated LV function in a significantly larger proportion of subjects than it overestimated it (28% vs 11%, P=0.025). The difference was most pronounced in subjects with moderate LV dysfunction by gated SPECT, 61% of whom had higher estimates of LV function on echocardiography (Table).

Thus, gated SPECT tends to underestimate LV function in subjects with LVH, especially in those with moderate LV dysfunction.

P-372
BETA-BLOCKADE MAY IMPROVE DIASTOLIC DYSFUNCTION IN THE ELDERLY. TRIAL TO IMPROVE DIASTOLE IN THE ELDERLY (TIDES) PILOT STUDY
Robert A. Phillips, Arlene Travis, Alexander Butkevich, Maryann McLaughlin, Barbara Paris, Jonathan P. Greenblatt, Mohammad A. Rafey, Mount Sinai School of Medicine, New York, NY, United States; Lenox Hill Hospital, New York, NY, United States.

The treatment for heart failure (CHF) due to diastolic dysfunction is not established. We conducted a pilot study on the effect of β-blockade on diastolic heart failure in the elderly.

18 subjects (15 women, 3 men; age 68±10 years) with fatigue or dyspnea on exertion not due to pulmonary disease and with normal systolic function were randomized to receive a β-blocker metoprolol XL or a placebo for 9 months, in addition to their medications. Heart failure scores, 6-min walk distance, 24-hour blood pressure (BP) and echocardiographic parameters were compared in the two groups at baseline and at 9 months.

Modified NHANES heart failure score improved significantly in the β-blocker group. 24-hour BP was not significantly different at baseline between the groups, and both groups had similar reductions in BP at 9 months. There was no significant change in 6-min walk or NYHA heart failure class in either group. Doppler E/A ratio tended to improve in the metoprolol XL group.

In summary, this data demonstrates that elderly subjects with CHF due to diastolic dysfunction can be identified and treated, and that β-blocker therapy improves signs and symptoms of CHF in this population. This pilot study provides the rationale for a large-scale trial of β-blockade in diastolic dysfunction.

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Key Words: Left Ventricular Hypertrophy, Gated SPECT, Ejection Fraction

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