IMPACT OF OBESITY ON REVERSIBILITY OF CONTRACTILE DYSFUNCTION IN PATIENTS WITH HYPERTENSIVE HEART DISEASE

ACC Moderated Poster Contributions
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Authors: Kaitlyn E. O'Brien, Beejal Shah, Juan Albisu Di Gennaro, Imran Uraizee, Amil Shah, Joseph Izzo, Suzanne Oparil, Bertram Pitt, Scott Solomon, Susan Cheng, Brigham and Women's Hospital, Boston, MA, USA

Background: Obesity has been associated with subclinical LV contractile dysfunction, even in the presence of a normal EF. The extent to which subclinical LV dysfunction is reversible in obese versus non-obese individuals is unknown.

Methods: We studied a subset of 166 patients (51% women; 51% obese) from the Exforge Intensive Control of Hypertension to Evaluate Efficacy in Diastolic Dysfunction (EXCEED) trial who underwent 24 weeks of intensive vs. standard anti-hypertensive therapy with valsartan + amlodipine (titrated to goal SBP <135 vs <140 mmHg) and had baseline and follow-up echocardiography. We examined the relation of BMI with reversibility of contractile dysfunction, as reflected by global longitudinal systolic strain.

Results: Obese compared to non-obese patients had similar systolic contractile function at baseline (-17.2±3.6% vs -17.3 ±4.4; P=0.77) but worse contractile function at follow up (-18.1±3.1% vs -19.4 ±3.8; P=0.02). Percent improvement in contractile function was less in patients with greater BMI (Figure). In multivariable analyses, greater BMI was associated with significantly less improvement in longitudinal strain (β=0.596; P=0.01) after adjusting for age, sex, treatment arm, change in SBP, and baseline measures of SBP, DBP, EF, LVM, E', and longitudinal strain.

Conclusion: In the setting of hypertensive heart disease with normal EF, patients with increased BMI experience less improvement in contractile function following treatment with antihypertensive therapy.

![Improvement in LV Contractile Function](image_url)

$P_{trend}=0.01$