QUALITY OF CARE AND OUTCOMES ASSESSMENT

WHICH ADIPOSITY MEASURE IS A BETTER PREDICTOR OF CARDIOVASCULAR MORBIDITY RISK FACTORS AND MORTALITY IN OBESE PATIENTS WITH HEART FAILURE?

ACC Oral Contributions

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Authors: *Nancy M. Albert, James F. Bena, Anne S. Tang, Jennifer Forney, Ellen Slifcak, Cleveland Clinic, Cleveland, OH*

Background: In the obesity paradox, obese patients are high risk to develop heart failure (HF), but once diagnosed with HF, obese patients live longer. The purpose of this study was to determine if adiposity by body mass index (BMI), waist-to-hip ratio (WHR), waist circumference (WC), and waist-to-height ratio (WHtR) uniformly predicted diet behavior adherence, functional status, knowledge (adiposity & diet/exercise expectations), and survival.

Methods: 302 obese adults (BMI $</=30$ kg/m2) with HF treated at a large Midwest tertiary-care center completed surveys on characteristics, medical history, diet, functional status and knowledge. 3-group comparisons for each adiposity measure were studied using regression models. Estimates of survival were calculated by Kaplan-Meier estimates and Cox proportional hazard models.

Results: Patient factors associated with the 4 adiposity measures varied. In all but WHR, female gender and non-white race were associated with higher adiposity (all $P</=0.02$) and in all but BMI, history of diabetics requiring medications was associated with higher adiposity (all $P<0.01$). Reducing fat was associated with higher BMI ($P=0.02$) and resisting relapse, reducing calories, reducing fat, behavioral skills and overall eating behaviors were associated with higher WC (all $P</=0.05$). Worse functional status was associated with higher adiposity in all but WHR (all $P</=0.01$). Knowledge score was low (10.2 ± 3.2; 51% correct responses) and was not associated with any adiposity measure. After multivariable regression, high BMI predicted worsening functional status and moderate WC predicted adherence to reducing fat behaviors ($P=0.04$) and trended toward adherence to overall eating behaviors ($P=0.08$). Survival did not differ by diet behaviors, functional status, knowledge, BMI, WHR or WC, but over 9 months was worse in patients with higher WHtR ($P=0.025$).

Conclusions: In obese HF patients, when adiposity was assessed as low, moderate or high, patient factors, morbidity outcomes and mortality differed by each adiposity measure studied. Before developing intervention programs to improve outcomes, data interpretation requires caution and future research is needed.