OBESITY PARADOX IN HEART FAILURE: IS IT THE ACCUMULATION OR THE MEDICATION?

ACC Poster Contributions
Georgia World Congress Center, Hall B5
Monday, March 15, 2010, 3:30 p.m.-4:30 p.m.

Session Title: Epidemiology, Medication and Advanced Directives
Abstract Category: Myocardial Function/Heart Failure--Clinical Pharmacological Treatment
Presentation Number: 1178-57

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Background: Obesity paradox, a “paradoxical” decrease in morbidity and mortality with increasing body mass index (BMI), has been observed in heart failure (HF). This finding is in contrary to that of the general population. It has not been well defined to what degree these results represent an actual phenomenon or reflect the limitations of post hoc analysis. We sought to define the relationship of obesity and optimum neurohormonal blockade in HF by titrating blood pressure medication.

Methods: A total of 820 HF patients (mean age 62 years, mean follow up 3.67 years, with 3006 patient years accumulated) were prospectively studied. Patients were classified according to baseline BMI: 18 to 25 kg/m2 (normal weight, n = 215) and >25 kg/m2 (obese, n = 605). Baseline characteristics such as age, gender, NYHA class and ejection fraction were similar in both groups.

Results: The primary outcome was the proportion that achieved target and tolerated maximum doses of ACE/ARB and BB. With patients of normal weight (mean BMI = 22.3 kg/m2) as the reference group, the likelihood of achieving target and maximum dose of ACE/ARB/BB was higher in the overweight and obese patients (mean BMI = 36.8 kg/m2) (Figure 1) with no significant difference in the drop of their SBP, DBP and HR (p = ns).

Conclusion: Overweight and obese patients are prevalent in HF and are likely to utilize higher doses of ACE/ARB and BB. Our results suggest that the protective effect of obesity in HF patients may be explained by aggressive neurohormonal suppression.