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MYOCARDIAL ISCHEMIA AND INFARCTION

BODY COMPOSITION AND SURVIVAL IN STABLE CORONARY HEART DISEASE: IMPACT OF LEAN MASS INDEX AND BODY FAT IN THE "OBESITY PARADOX"

ACC Poster Contributions
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Session Title: Stable Ischemic Syndrome: Predictors and Models
Abstract Category: 5. Stable Ischemic Syndrome
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Background_In coronary heart disease (CHD) , an inverse relationship between obesity and subsequent prognosis has been demonstrated (the "obesity paradox"). However, there is little data on the impact of lean mass index (LMI) and body fat (BF) on prognosis in stable CHD.

Methods_We studied 570 patients with stable CHD, who were divided into low (cutoff ≤ 18.9 kg/m2 for men and ≤ 15.4 kg/m2 for women) and high LMI, as well as low (cutoff ≤ 25% men and ≤ 35% women) and high BF. Mortality over 3-year follow-up by National Death Index was assessed: Low BF/Low LMI (n=62), High BF/Low LMI (n=53), Low BF/High LMI (n=179) and High BF/High LMI (n=276).

Results_Mortality was highest in the Low BF/Low LMI group (15 %), which was significantly higher than the other 3 groups (4.5 % for Low BF/ High LMI (p=0.0001), 5.7 % for High BF/Low LMI (p=0.0025) , and 2.2 % for High BF/High LMI (p<0.0001), respectively; Figure). The high BF/high LMI group had significantly lower mortality than all other groups (p=0.003 vs High BF/Low LMI; p=0.03 vs Low BF/High LMI). In multiple logistic regression analysis, high LMI(OR .75; CI .58-.97) and high BF(OR .9;CI .83-.97) predicted lower mortality.

Conclusions_In stable CHD, both LMI and BF are independent predictors of mortality, with mortality being particularly high with low LMI and low BF, whereas mortality is lowest with high LMI and high BF. Determination of optimal body composition in primary and secondary prevention is needed.