Pulmonary Hypertension

PROGNOSTIC FACTORS IN PULMONARY HYPERTENSION: THE OBESITY PARADOX

ACC Oral Contributions
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Background: Prognostic assessment in patients with pulmonary hypertension (PHT) is important for clinical evaluation and therapeutical decision making.

Methods: 105 patients with PHT were evaluated by clinical characteristics, echocardiography and right heart catheterization. We assessed prognostic factors during a mean follow-up period of 19±13 months.

Results: Thirty patients (29%) died. Death was associated with higher pulmonary artery and right atrial pressures, enlarged right ventricular size and reduced function, preserved LV ejection fraction, higher transpulmonary gradient and pulmonary vascular resistance, and inverse relation with body mass index (BMI). Lower cardiac output and elevated capillary wedge pressures were not associated with higher mortality. In multivariate analysis obesity (BMI ≥30kg/m²), was the only variable independently correlated with improved survival [H.R 0.2, 95% C.I 0.1-0.5; p=0.001], even after adjustment for baseline characteristics or heart failure measures. Obese and very-obese patients had significantly less mortality rates (15% and 8%) than normal/over-weight patients (35% and 40%), p=0.02.

Conclusions: In a cohort of PHT patients, obesity was significantly associated with lower mortality in multivariate analysis, compared to normal and over-weight patients. Similar to previous observations in other cardiovascular states, there may be an obesity-paradox in patients with PHT, necessitating further research in larger cohorts of patients.
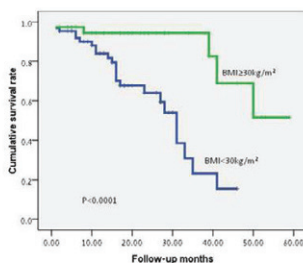

Figure 1: Survival curves, for obese (BMI≥30) and non-obese (BMI<30) patients
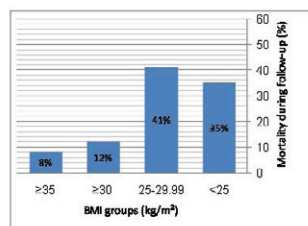

Figure 2: Mortality rates during follow-up period, According to BMI groups.