Abstract: P442

"Obesity Paradox" in patients with chronic heart failure and comorbidity

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Topic(s):
Chronic Heart Failure: Comorbidities

Citation:
The improved survival in obese patients compared with patients with normal body weight (obesity paradox) has not been insufficiently studied in patients with chronic heart failure (CHF). The aim of this study was to investigate nutritional status of patients with CHF, depending on comorbidity.

Methods. 200 patients with CHF (130 males and 70 females, mean age was 61.5±9.6 years) were studied. CHF was defined according to ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure, 2016. Age-adjusted Charlson Comorbidity Index (ACCI) was estimated. The studied patients were divided into 3 groups: I group (low comorbidity) with an index = 3 scores; II group (moderate comorbidity) with an index 4-5 scores and III group (high comorbidity) with an index = 6 scores. Follow-up period was 12 months.

Results. Age-adjusted Charlson Comorbidity Index was 5.0±2.1 scores. Metabolic syndrome was observed in 89 (43.8%) patients, obesity with a BMI = 30 kg/m² - 97 (48.5%), overweight - 62 (31.0%) patients with CHF. Metabolic syndrome was diagnosed more often in patients with CHF with low comorbidity compared patients with high comorbidity: 38 (71.6%) vs 24 (31.2%), resp., χ² =19.05; PI-III=0.009. Waist circumference in CHF patients with high comorbidity was less than in patients with low comorbidity: 100.4±15.6 vs 106.8±14.5 cm, resp., PI-III-I=0.01. Patients with CHF and low comorbidity had higher body mass index compared with patients with high comorbidity: 32.1±6.1 vs 28.9± 5.5 kg/m², resp., PI-III=0.04. Relative risk of death within 12 months in patients with CHF and high comorbidity was 1.68 (95% CI 1.35 - 2.09) in comparison with patients with low comorbidity. According to the results of our study, patients with CHF and higher body mass have lower comorbidity, i.e. more favorable long-term prognosis.

Conclusions. Patients with chronic heart failure and high comorbidity have lower body mass index, higher waist circumference and a poor prognosis compared with patients with chronic heart failure and low comorbidity. This fact may be one explanation for the «obesity paradox» in patients with chronic heart failure.