THE PROGNOSTIC IMPORTANCE OF ANEMIA IN PATIENTS WITH HEART FAILURE

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Aim. The aim of this study was to assess prospectively the relationship between the prevalence of anaemia (haemoglobin level < or = 120 g/l) and prognosis in an unselected chronic heart failure population.

Material and methods. All consecutive patients with a diagnosis of chronic heart failure admitted to department of atherosclerosis between January 2009 and April 2010 were considered for the present study. Those with secondary causes of anaemia were excluded. Patients were followed up until November 2013 = (>19 months in all survivors), and the end-point of the study was all-cause mortality.

Results. A total of 176 patients were enrolled (mean age: 67 years, New York Heart Association (NYHA) classification I/II/III/IV: 15/81/51/29; left ventricular ejection fraction (LVEF): 42%, ischaemic aetiology in 62%). In the whole population the mean haemoglobin level was 140 ± 15 g/l. Anaemia was found in 18 (10%) patients, and was significantly more common in women than in men (18 vs. 7%, respectively, $P = 0,02$) and in those with most severe CHF symptoms (frequency in NYHA I/II/III/IV: 0/9/10/21%, respectively; NYHA IV vs. I–III, $P = 0,03$), but not related to the other clinical indices. Univariate analysis revealed NYHA class III-IV (hazard ratio 3,8, 95% CI: 1,6–8,9, $P = 0,003$), low LVEF < 35% (hazard ratio 2,3, 95% CI: 1,0–4,9, $P = 0,04$) and anaemia (hazard ratio 2,9, 95% CI: 1,2–7,2, $P = 0,02$) as predictors of 18-month mortality. In multivariate analysis, anaemia remained an independent predictor of death when adjusted for NYHA class and LVEF (hazard ratio: 2,6, 95% CI: 1,0–6,5, $P = 0,04$). In anaemic patients, 18-month survival was 67% (95% CI: 45–89%) compared to 87% (81–92%) in patients with a normal haemoglobin level ($P = 0,016$).

Conclusions. Mild anaemia is a significant and independent predictor of poor outcome in unselected patients with chronic heart failure. Correction of low haemoglobin level may become a perspective therapeutic option for chronic heart failure patients.