Prognosis value of the mini nutritional assessment short form tool in outpatients with heart failure with mid-range ejection fraction

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Topic(s):
Heart Failure with Mid-range Ejection Fraction

Citation:
Background: Nutritional status is an important prognostic factor in patients with heart failure (HF) beyond body mass index, although its prognostic value in patients with mid-range left ventricular ejection fraction (HFmrEF) is not completely elucidated. In a pilot study we observed that the Mini Nutritional Assessment Short Form tool (MNA-SF) was the best approach for the screening of nutritional status in HF outpatients over others screening tools.

Purpose: To assess the prognostic role of malnutrition or risk of malnutrition in HFmrEF outpatients after the implementation of the MNA-SF screening tool in a routine way in a multidisciplinary HF.

Methods: The MNA-SF screening tool was administered during the global nurse evaluation of patients. The scoring ranges from 0 to 14, being considered 0 to 7 as malnutrition status, 8 to 11 as being at risk of malnutrition and 12 to 14 as normal nutritional status. For the present study those patients with malnutrition and at risk of malnutrition were merged and considered abnormal nutritional status. All-cause death was the primary end-point. Univariate and multivariate (backward conditional stepwise) Cox regression analyses were performed.

Results: Since October 2016 to November 2017, 153 HFmrEF patients were studied (mean age 68.8 ± 11.7 years, 72.5% men, body mass index 28.4 ± 4.4, LVEF 44% ± 3, NYHA class I 5.9%, II 86.3%, and III 7.8%). According to the MNA-SF 25 patients were (16.3%) fulfilled criteria of malnutrition (4) or where at risk of malnutrition (21). During a mean follow-up of 17.4 ± 6.1 months, 23 patients died (15%). In the univariate analysis, nutritional abnormal status was significantly associated with all-cause death (HR 2.93 [1.23-7], p=0.02). In the multivariate analysis which included age, sex, NYHA functional class, body mass index, ischemic etiology of HF and years of duration of HF, abnormal nutritional status remained significantly associated with all-cause mortality (HR 3.64 [1.39-9.54], p=0.009), together with NYHA functional class (HR 7.93 [2.69-23.4], p<0.001) and years of HF duration (HR 1.10 [1.04-1.16], p=0.001).

Conclusions: Nutritional status assessed with the screening tool MNA-SF was an independent predictor of all-cause death in ambulatory patients with HFmrEF –beyond BMI– together with NYHA functional class and HF duration.
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