Prevalence and clinical impact of social frailty in elderly patients hospitalized for acute decompensated heart failure: a multicenter prospective cohort study

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On behalf: Kochi YOSACOI study

Topic(s):
Acute Heart Failure – Epidemiology, Prognosis, Outcome

Citation:
European Heart Journal (2019) 40 (Supplement), 2146

Purpose: The aim of this study was to investigate clinical characteristics of socially frail patients and an association with social frailty and short-term rehospitalization for worsening heart failure.

Methods: We analyzed 169 elderly patients (≥65 years old) hospitalized for acute decompensated heart failure (ADHF) between June 2017 and August 2018 in our prospective HF registry in Japan. The patients with activities of daily living dependence and without data of social frailty and outcome were excluded. Social frailty was determined based on their responses to the 5 questions (living alone, eating alone, going out less frequently, rarely visiting friends, not helpful to friends or family). Patients with none of these components were considered social non-frailty; those with one component were considered social prefrailty; those with two or more components were considered social frailty. The outcome was rehospitalization for worsening HF within 6 months after discharge.

Results: The mean age was 79±8 years old. Social frailty in 86 patients (50.8%), social prefrailty in 41 patients (24.3%), and social non-frailty in 42 patients (24.9%) were observed. Age, body mass index, geriatrics nutritional risk index, Hasegawa dementia rating scale-revised score, gait speed, and handgrip strength values were significantly different among the these three groups (all Ps for trend <0.01). Left ventricular ejection fraction, brain natriuretic peptide values, and the proportion of the patients with the symptom of New York Heart Association class III/IV did not vary significantly between the groups. Kaplan-Meier analysis revealed that higher prevalence of rehospitalization for worsening HF within 6 months in the social frailty group compared to that in the social non-frailty group (Log-rank p<0.05). In a Cox proportional hazard model after adjusting covariates, patients with social frailty (hazard ratio 4.77; 95% CI 1.61–14.12, p<0.005) and social prefrailty (hazard ratio 3.73; 95% CI 1.12–12.41, p<0.05) had an increased risk of rehospitalization for worsening HF within 6 months compared with those with social non-frailty.

Conclusion: This study revealed that social frailty was common in elderly patients hospitalized for ADHF, and social frailty was an independent predictor of rehospitalization for worsening HF within 6 months after discharge.