Cognitive Deficits in Chronic Heart Failure

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Abstract

In our previous studies, patients with heart failure (HF) reported cognitive deficits as a major problem that diminished their health-related quality of life (HRQL). Cognitive deficits can seriously limit patients' ability to accurately follow their regimen, which can further reduce HRQL and increase morbidity and mortality. In a pilot study, we found that more than one-third of 50 HF patients had mild to moderately severe cognitive deficits. Therefore, the primary specific aims of this cross-sectional study are 1) to determine the types, frequency, and severity of cognitive deficits (i.e., problems in global cognitive function, memory, working memory, language , executive function, and psychomotor speed) among 300 patients with chronic HF using an age- and education-matched comparison group of 100 healthy participants as reference, and to determine if the cognitive deficits of HF patients are worse than an age- and education –matched comparison group of 100 medicine patients with other major chronic medical conditions but without HF; and 2) guided by the conceptual model of cognitive deficits and HRQL, to evaluate the most likely etiology of cognitive deficits among HF patients (circulatory insufficiency leading to inadequate cerebral perfusion and cerebral hypoxia) as well as the contribution of other factors (age, comorbid conditions, hypertension, and depressive symptoms) that may be associated with cognitive deficits in this patient group to provide a foundation for the development of interventions to reduce or manage cognitive deficits in order to improve HRQL. We will assess cognitive deficits in a sample of patients with chronic HF (75 each of NYHA class I, II, III, and IV). The extent of the deficits will be measured against a reference group of healthy participants and a sample of medicine clinic patients with major chronic medical disorders but not HF. Guided by the conceptual model, we will examine potential etiologies of the cognitive deficits. Interviews will be performed at a time and place convenient for participants. Analyses will be completed using descriptive statistic, Z-scores, t-tests, and regression analysis. As an exploratory aim, we will describe the strategies that HF patients with mild or moderate to severe cognitive deficits use to manage care and maintain HRQL. The data obtained from this study are critically needed in order to design and test interventions for patients with HF whose care is complicated by cognitive deficits.

Performance Site(s)

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