PURPOSE: A considerable number of patients suffered from mild cognitive impairment (MCI), but until now there has been insufficient evidences for understanding of mechanisms and risk factor of MCI. This pilot study was conducted to explore the prevalence and risk factors of MCI which impacts on heart failure patients' self-care and quality of life.

METHODS: In this cross-sectional study, 94 patients with heart failure were participated from one Medical hospital in Korea. Participants completed neuropsychological tests and structured questionnaire (consisting of beck depression inventory, beck anxiety inventory, cognitive failures questionnaire and demographics. Raw scores from neuropsychological tests were transformed to Z-score using existing normative data correcting for age, gender, and education. In this study, complex MCI were defined if two more domains were impaired. Logistic regression was used to analyzing the risk factors for MCI in heart failure patients.

RESULTS: Mean age of participants were 67.1 years old. Of the patients, 68 were male and 45 were diagnosed as ejection fraction redacted heart failure. Patients with heart failure scored lower than expected age and education adjusted norms in the domains of memory (z = -3.02, SD = 1.15), and executive function (z = -1.42, SD = 2.21). Meanwhile, the patients’ attention domain score was similar with norm based score (z = 0.01, SD = 1.11). 57.4% of heart failure patients exhibited complex cognitive impairment. According to the logistic regression, low-income (odd ratio [OR]=12.11, p=.035), low level of activity (OR=1.03, p=.044), and depressed (OR=7.44, p=.007) patients were at high risk for cognitive impairment.

CONCLUSION: These results suggest that patients with heart failure may be associated with mild cognitive impairments. Screening for low-income, low level of activity is important and necessary to identify patient who are at risk of cognitive impairment. Further studies are needed to develop and evaluate nursing interventions for prevention cognitive impairments and enhance self-care and quality of life through supporting cognitive function.
Abstract Summary:

Mild cognitive impairment is common problem in heart failure. This study was conducted to explore the risk factors of cognitive impairment. In the results, low-income, low-activity, and depressed patients were at high risk for cognitive impairment.

Content Outline:

Purpose:

This pilot study was conducted to explore the prevalence and risk factors of mild cognitive impairment which impacts on heart failure patients’ self-care and quality of life.

METHODS:

This study used a descriptive research design. Total 94 heart failure who diagnosed heart failure in a university hospital in the Korea were recruited in this study.

Cognitive function was measured using neuropsychological tests by trained research assistant and risk factors (depression, anxiety, educational level) were assessed using questionnaire.

Data analysed using SPSS 23.0 program. Raw scores from neuropsychological tests were transformed to Z-score. The risk factor was analyzed using logistic regression.

RESULTS:

Patients with heart failure scored lower than expected age and education adjusted norms in the domains of memory, and executive function.
57.4% of heart failure patients exhibited complex cognitive impairment. According to the logistic regression, low-income, low level of activity, and depressed patients were at high risk for cognitive impairment.

CONCLUSION:

Screening for high risk patients were needed.

Further studies are needed to develop and evaluate nursing interventions these patients should be conducted.

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**Author Summary:** 2015-present - Associate Professor, Ajou university, College of Nursing, Suwon, Korea. Sun Hyoung Bae has her expertise in evaluation and passion in improving the Nursing science and wellbeing. She has been involved in research team on cancer patients and cardiovascular disease patients, and has recently been conducting intervention studies to improve cognitive function in patients with heart failure.

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