Impact of qualified nursing education on self-care and disease knowledge in heart failure patients

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Purpose: Guidelines on management of heart failure patients support intensive patient education on self-care. To evaluate the short and long-term impact of a structured education by a qualified heart failure nurse on patient’s self-care and disease knowledge.

Methods: 131 patients (66±12 years) hospitalized for heart failure participated in a structured one hour education program by a heart failure nurse. Patients completed a questionnaire consisting of 15 questions, nine of the European Heart Failure Self-Care Behaviour Scale (EHFScB-9) and additionally six questions on the patient’s disease knowledge 1 day before, 6 months and 12 months after the education course. Possible responses ranged from 1 (complete agreement) to 5 (complete disagreement). Clinical events during the 12 months follow-up period were determined. Factors predicting with potential impact on the teaching effect were evaluated. Seven patients refused further participation during follow-up, 13 patients were lost during follow-up, and one patient was excluded from the study due to progressive dementia.

Results: Nine patients died during the study and 33 patients had recurrent hospitalization for heart failure. EHFScB-9 scale improved from 24.0±7.2 at baseline to 17.0±7.4 (p<0.001) at 6 months, and 17.2±6.1 (p<0.001 vs. baseline) after 12 months. Concerning the disease knowledge score, it improved from 17.9±5.3 at baseline to 12.1±4.3 (p<0.05) at 6 months follow-up, and to 12.0±5.5 (p<0.05) at 12 months after education. Scores to individual questions prior to education ranged from 1.2±0.8 on adherence to the medication protocol to 2.7±1.4 on everyday weighting habits. Greatest improvement after education were obtained on reaction to weight gains (-1.9±1.3), daily weight control (-1.6±1.4) and knowledge on the reason of patient’s heart failure (-1.6±1.2). The NYHA-classification improved from 2.8±0.8 before teaching to 2.2±0.7 (p<0.001) at 12-months follow-up. No predictor of an insufficient teaching effect could be defined. Patients with a clinical event (death, recurrent hospitalization) had a combined EHFScB-9 and disease knowledge score of 32.6±8.1 vs. 28.9±9.9 in those patients without a clinical event. Patients with more than one hospitalization due to acute decompensated heart failure during the follow-up period express insignificant improvement of the combined EHFScB-9 and disease knowledge score immediately after the education session.

Conclusions: A qualified nurse education program improves self-care behaviour and patient’s disease knowledge with a persisting effect at 6 and 12 months follow-up. There are no patient characteristics which preclude the implementation of an educational session.