CARDIAC FUNCTION AND HEART FAILURE

HISTORY OF HEART FAILURE HOSPITALIZATIONS AND BENEFIT FROM HOME-BASED NURSE CARE IN CHRONIC HEART FAILURE

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Background: Multidisciplinary programs are recommended for heart failure (HF) patients, but due to limited resources they need to be focused on patients with the greatest potential benefit. Those with high re-hospitalization rates might exert the greatest benefit, especially in terms of reduction of HF-hospitalizations. Previous HF-hospitalizations might predict future re-hospitalizations and therefore be a good tool to identify patients that will benefit from a nurse intervention. Therefore, we investigated whether the history of HF-hospitalizations can predict benefit from a home-based nurse intervention.

Methods: 374 ambulatory HF-patients were randomized to nurse care or usual care. Nurse care consisted of scheduled home-based visits of a specialized HF-nurse at 1, 3, 6 and 12 months after randomization. The endpoint was the composite of death or HF-hospitalization within 18 months.

Results: In a multiple stepwise Cox-regression model, B-type natriuretic peptide (BNP, hazard ratio [95% confidence intervals]: 1.63 [1.38-2.60], p<0.001), allocation to nurse care (0.52 [0.38-0.71], p<0.001), age (1.2 [1.01-1.04], p=0.003) and BMI (0.96 [0.92-1.00, p=0.038) were the only independent predictors of outcome besides previous HF-hospitalizations (1.99 [1.47-2.70], p<0.001). For prediction of outcome, BNP showed a significant interaction with nurse-care indicating that patients with higher BNP had a higher benefit from nurse care (p=0.030).

In contrast, there was no significant interaction between previous HF-hospitalizations and nurse care (p=0.162) indicating that nurse care improved outcome independent of the history of HF-hospitalizations.

Conclusions: Although the history of HF-hospitalizations predicts heart failure events, both patients with and without previous HF-hospitalizations benefit from home-based nurse care to the same extent. Therefore, in contrast to BNP, the history of HF-hospitalizations cannot be used to focus home-based nurse care to patients with the highest potential benefit.