Clinical study: quality of care

Cardiology participation improves outcomes in patients with new-onset heart failure in the outpatient setting

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Abstract

Objectives

This study examined the outcomes of new-onset heart failure (HF) outpatients managed by cardiologists and primary care (PC) physicians.

Background

Several studies have sought differences in outcomes between patients with HF managed by cardiologists and PC physicians, but most focused on inpatients, who often represent later stages of HF, whereas many treatments have their impact by delaying disease progression.

Methods

This was a retrospective cohort study of incident HF identified between 1996 and 1997 in a staff model health maintenance organization. Cardiology care was defined as ≥2 visits or ≥25% of total medical outpatient visits to cardiology. Records from a cohort of 403 patients with new-onset outpatient HF were reviewed. The main outcome measure was a combination of death and/or cardiovascular hospitalization at 24 months.
**Results**

Cardiologists' patients (n = 198) were younger (66 vs. 71 years, P = 0.001), were more likely men (54% vs. 46%, P = 0.01), had coronary artery disease (64% vs. 42%, P = 0.001), and had a low (≤ 45%) ejection fraction (EF) (66% vs. 44%, p < 0.001) compared with PC physicians' patients. More cardiologists' patients received an EF assessment (94% vs. 74%, p < 0.001), angiotensin-converting enzyme inhibitors (83% vs. 68%, p < 0.001), and beta-blockers (38% vs. 22%, p < 0.001). In multivariate proportional hazards modeling that included variables that differed between providers and univariate predictors of outcomes, cardiology care was an independent predictor of a lower risk for the combined outcome (hazard ratio 0.62, confidence interval 0.42 to 0.93, P = 0.02).

**Conclusions**

Cardiology care at this early stage of HF is associated with improved guideline adherence and a reduced risk of the composite outcome of death plus cardiovascular hospitalization.

**Abbreviations:** ACE; angiotensin-converting enzyme; AF; atrial fibrillation; CAD; coronary artery disease; CC; cardiology care; CI; confidence interval; EF; ejection fraction; HF; heart failure; HMO; health maintenance organization; HR; hazard ratio; ICD; International Classification of Disease; KPMCP; Kaiser Permanente Medical Care Program; MI; myocardial infarction; PC; primary care