

## Managing Heart Failure in the Elderly: a Primary-Care Perspective

### To the Editor:

Patients with heart failure require frequent hospital admission, with poor adherence being one of the main causes of further episodes of decompensation.<sup>1</sup> We therefore read with interest the study by Morcillo et al<sup>2</sup> on the benefits resulting from a home-based educational program for the treatment of heart failure. Further to this, we are able to provide one-year data from a follow-up study of a group of older patients who had received training in the health center on heart failure and its treatment, in an attempt to improve patient adherence and treatment of the disease.

The study included 66 patients aged 69 years or older with heart failure who were seen at 6 primary care centers in Terrassa (Barcelona). The inclusion criteria were: independence for basic activities of daily living (Barthel index >90),<sup>3</sup> absence of worsening cognitive function

**TABLE. Baseline Characteristics\***

Hypertension	72.7%
Dyslipidemia	50%
Diabetes mellitus	36.4%
NYHA functional class	
I	28.7%
II	56%
III	15.3%
Etiology	
Ischemic	25.8%
Hypertensive	39.3%
Other	34.9%
Treatment (at the start of the study)	
ACE inhibitors	65%
ARA-II	21%
Diuretics	84%
Beta-blockers	15%
Echocardiogram in last year (n=36)	
Conserved ejection fraction	70%
Ejection fraction <45%	30%

\*ARA-II indicates angiotensin II receptor antagonists; ACE, angiotensin converting enzyme.

(Pfeiffer index <3 errors)<sup>4</sup> and clinically stable heart failure at the time of inclusion. No patient was in New York Heart Association (NYHA) functional class IV or had a life expectancy of less than 3 months. Data were collected on demographics, the presence of cardiovascular risk factors, an echocardiogram during the previous year, the type of heart failure, the NYHA functional class, the number of hospital admissions due to heart failure during the previous year, adherence to pharmacologic and dietary treatment, and whether the patient had received any type of education on heart failure beforehand. Prior to starting the study, the participating health care professionals (physicians, nurses, and social workers) underwent a refresher course on heart failure and together they drew up a protocol, in order to unify their management actions. The initial intervention was based on a simple, didactic explanation in the patient's own home about what the disease was, why and how to treat it with drugs, diet and hygiene, and detection of the main warning signs before decompensation of their heart failure. The patients were provided with a telephone number to call should it prove necessary and their treatment was re-evaluated with a view to optimizing it. After one year's follow-up all the patients had been seen at least 3 times in their health center to reinforce their education on heart failure, as well as that of the caregivers.

The patient group comprised 38 women (57.6%) and 28 men, with a mean age of 78.5 years. Table shows the baseline characteristics. A total of 45 (68.2%) patients reported having received previous training about heart failure. Twenty-four patients (36%) were identified as non-adherers. The number of hospital admissions due to heart failure during the previous year was 0.4 (range, 0-3), with a mean hospital stay of 6 days. After one year's follow-up the percentage of non-adherers was reduced (36.4% vs 1.5%;  $P<.0001$ ). Evaluation of the subgroup of 8 patients who had had more than one admission during the previous year showed that the episodes of admission fell from 1.4 to 0.4

( $P < .001$ ), and that the mean hospital stay was also reduced in these patients from 11 to 5 days ( $P = .009$ ). Regarding the treatment, prescriptions for beta-blockers almost doubled (from 15% to 29%;  $P = .09$ ).

One of the limitations of this study involves the reduced number of patients in the sample. It is difficult to consider that the reduction in mean hospital stay was due to inclusion in the study, although it may have helped that the patients attended their health centers earlier, and were therefore in less severe clinical stages. However, this particular facet was not evaluated as such in the study.

In conclusion, our experience appears to confirm that interdisciplinary interventions in health centers on health education and treatment review in patients with heart failure and/or their caregivers are beneficial for the treatment of these patients, especially those who have been admitted for heart failure more than once during the previous year.

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