Editorials

Heart failure overview

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Editorial Note: The gender initiative continues with editorials addressing an increasingly common clinical syndrome, heart failure. Sharon Hunt, MD, gives an insightful overview addressing the magnitude of the clinical and economic consequences of heart failure. Mariell Jessup, MD, and Ileana L. Piña, MD, continue with an analysis of possible gender differences in epidemiology, management, and outcomes of the syndrome. Finally, Sara Shumway, MD, looks at surgical options in women diagnosed with end-stage heart failure at various ages and the implications for their quality of life. The series continues in July with editorials addressing gender differences in pediatric cardiac surgery.

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See related editorials on pages 1247 and 1253.

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The clinical syndrome of heart failure (HF) is associated with a high prevalence and a high mortality, even in the “modern” era. Hospital discharges for HF rose from 377,000 in 1979 to 999,000 in 2000, an increase of 165%. The rate of this increase is much higher in women than in men.¹ The reasons for this increase in hospitalizations are likely the facts that HF is predominantly a disease of the elderly and that there has been a progressive increase in the segment of the U.S. population that is >65 years of age,² as well as the fact that HF represents the end stage of a variety of cardiovascular diseases (coronary artery disease, hypertension, diabetes, valvular disease, sudden death) that are being more successfully treated in their early stages. The success of early treatment results in an increasing population, predominantly elderly, of patients with HF who place an increasing burden on our health care system not only in terms of demand for complex clinical care but also in terms of cost. It is estimated that the total of direct and indirect costs for HF in the United States in 2003 will be \$24.3 billion.³ In contrast, in 1999 the estimated cost of human immunodeficiency virus infections, which affect a much smaller segment of the population, was \$28.9 billion.³

Over the past 20 years there has been major progress in devising medical therapy for HF; some of the largest clinical trials ever conducted have validated the utility first of angiotensin-converting enzyme inhibitors and later of beta-adrenergic blocking agents in prolonging life, improving quality of life, and avoiding hospitalizations in patients with this syndrome. More recent additions to the roster of proven therapies for subsets of patients have included angiotensin receptor blockers and aldosterone antagonists; multiple other drugs and modalities are under investigation. Despite these advances, mortality for patients with HF remains high. However, some good news from the Framingham Heart Study published last year documented that the incidence of heart failure has declined among women, but not among men, over the past 50 years and the survival rates after the onset of heart failure have improved in both genders.⁴ Mortality remains high, however, and compares unfavorably with those associated with many types of cancer. The 5-year mortality among men after the onset of heart failure declined from 70% in the period from 1950 to 1969 to 59% in the period from 1990 to 1999, and in women from 57% to 45% between the same time periods.⁴ The reasons for this improvement in survival rates are not clear, nor is the actual timing of the improvement.⁵ The improvement may relate to the introduction of the aforementioned forms of therapy and also to improving treatment of the underlying causes of HF such as hypertension.

Although the improvements documented in the Framingham Health Study are quite encouraging, it is clear that the prolonged survival after the onset of HF coupled with the “aging” of the population will translate in the future into markedly increased numbers

of patients requiring complex care for this syndrome. This situation will likely lead to increasing demand for better medical and surgical therapies to affect outcomes.

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