Preface

Primary Prevention of Heart Failure

Heart failure is an overt disease that afflicts 5 million people in the United States alone, with 10% new patients added to the pool every year. Annually, every patient with heart failure pays an average of three visits for outpatient care, at least one in five is admitted to the hospital for exacerbation of disease, and nearly 300,000 deaths are attributed to heart failure and its attendant complications. The average annual expenditure is over $6000 per case. Despite our major recent successes in therapy, a much better strategy for containment needs to occur; prevention of heart failure must become a priority.

The disease appears even more frightening when we observe the worldwide burden measured in tens of millions and even more afflicted individuals who have morphologic evidence of disease but subclinical symptomatology. We now stand at the same crossroads that we visited 40 years ago with the rising prevalence of coronary artery disease in this country. That epidemic has only abated with concerted efforts targeting the modification of risk factors and the eventual prevention of disease. That struggle is not resolved, but we have curbed the epidemic.

We are now beginning to learn about the risk factors for heart failure, which are not dissimilar from the risk factors for the broad context of all
cardiovascular disease. Although fewer patients develop myocardial infarction or die of the acute event, more survive with compromised ventricular function and eventual heart failure. Relatively fewer complications of hypertension are seen; however, patients survive longer and will ultimately experience either diastolic or systolic dysfunction, ultimately leading to heart failure. Diabetes and obesity are increasing and independently contribute to heart failure. Thus, correction of adverse risk factors for atherogenesis, aggressive therapy of hypertension with effective blood pressure lowering using evidence-based regimens, adequate control of diabetes, and reversal of our trends toward increasing obesity represent risk factors for heart failure and targets to prevent this dreaded disease.

Longer life expectancy in and of itself predisposes to the disease. More than one quarter of the populace of the country seems to be at risk, which warns of an even greater impending epidemic.

Recent guidelines from the American College of Cardiology–American Heart Association efforts have included the subjects at risk (ie, “pre-heart failure” or “stage A”) in the broader spectrum of heart failure. These guidelines have formally recognized the problem, but not enough is being done to prevent it. For patients who have asymptomatic left ventricular dysfunction or “stage B,” it behooves us to develop strategies to prevent the process of remodeling. Prevention and arrest of ventricular remodeling will need to be addressed in a comprehensive manner that must include the discovery of basic mechanisms of growth and hypertrophy, widespread adherence to evidence-based treatment strategies, and a heightened sense of awareness at the grass roots level. Primary care physicians and internists will have to play a greater role.

This issue of the Medical Clinics of North America is aimed at seeking involvement of the wider physician community toward prevention of disease. Various articles highlight the epidemiology of heart failure and address the genetic and pathophysiologic basis of conversion of risk factors to evolution of ventricular disease, while other articles discuss the nuances in the management of these risk factors with the premise of preventing ventricular dysfunction and ultimately heart failure.

Prevention strategies for clinical disease states are challenging because they lack the cachet and zeal associated with technologic, biologic, and digital advances that capture both the lay and physician communities. Randomized clinical trials require large numbers of patients, substantial budgets, and long timelines before meaningful data are obtained. Reimbursement for pre-emptive medical care is miniscule. Rigorous adherence to preventive measures, especially lifestyle changes, is meager. However, the burden of many chronic disease states, especially heart failure, must galvanize our attention and focus our efforts on prevention. We can ill afford to ignore the need to prevent heart failure.
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