Preface

Heart Failure: A Common and Complex Clinical Syndrome

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Guest Editor

This issue of *Medical Clinics of North America* focuses on various issues dealing with heart failure (HF). It is quite evident to most clinicians that HF is a major growing public health problem. Most clinicians frequently encounter patients with HF in everyday clinical practice. HF is a leading cause for hospitalization (≥1 million admissions yearly) in the Medicare population. Appropriate treatment designed to prevent and treat heart failure can significantly reduce the associated high morbidity and mortality. It is with this focus that I have put together this compendium of articles dealing with the most important issues regarding the pathophysiology, diagnosis, and treatment of patients with HF and frequently associated comorbidities.

In the first article we describe the current epidemiology and focus on the renewed understanding of the pathophysiologic process involved in various stages of the development of HF. A clear understanding of the pathophysiology should help the clinician target appropriate therapy. The second article by Dr Chatterjee describes the differences and similarities between the signs, symptoms, and prognostic factors in systolic versus diastolic HF. This is particularly important due to the fact that, depending on the clinical setting, as many as one half of the patients with HF nowadays have diastolic HF (also known as HF with preserved ejection fraction). The advent of biomarkers, especially BNP, has revolutionized the diagnostic accuracy for HF and this along with the value of other biomarkers in HF is discussed in detail in the article by Maisel and coauthors.

During the past 2 decades considerable progress has been made regarding the use of evidence-based therapy with RAAS blocking agents (ACE inhibitors, ARBs, and aldosterone antagonists) and β-blocking drugs in HF. Treatment with these drugs is now recommended by all national and international guidelines as standard therapy in HF. Such evidence-based therapy not only improves symptoms but also reduces the morbidity and mortality in patients with HF, which is described in detail in article 4.

Although diuretic therapy is extremely useful in relieving congestion, it is considered by many as the standard treatment in all patients with HF. It is important to recognize
that diuretics need to be used only in the setting of a fluid-overloaded state and that excessive and unnecessary use of diuretics can lead to further activation of neurohormonal axes and in some cases the development of cardiorenal syndrome. We describe the underlying mechanism and appropriate use of diuretic therapy along with discussion of some new diuretics in article 5.

Many patients with HF have symptoms and signs related to low cardiac output and often require inotropic therapy to maintain adequate perfusion. However, despite the necessity to use inotropes in HF, a number of studies have demonstrated that there is increased mortality associated with the use of inotropic therapy and hence it is crucial to understand appropriate uses and limitations of such treatment. These issues are discussed in detail in article 6 by Hauptman and coauthors. As mentioned earlier, inappropriate and excessive use of diuretics can lead to cardiorenal syndrome. Additionally, this issue is compounded by underlying CKD that is present in as many as one third of patients with HF. The underlying pathophysiology and management of patients with cardiorenal syndrome is discussed in detail by Butler and associates in article 7.

The next article by Tang and coauthors deals with the frequent issues of comorbidities such as diabetes, anemia, etc, that are frequently encountered in patients with HF and have significant impact on the prognosis as well as management of patients with HF. Atrial fibrillation and heart failure often coexist and each has a significant impact on the management issues and prognosis of the other. During the past decade there have been several pivotal studies that have evaluated the impact of various therapeutic strategies in patients with HF and atrial fibrillation. These are discussed in detail in the article by Lardizabal. Finally, HF in cancer patients often related to chemotherapy use is discussed in detail by Moslehi and coworkers.

Although it is difficult to cover everything about HF and related conditions in a limited monograph such as this one, I have attempted to include the topics that are most relevant for the clinician in everyday practice in the hope that expanding their knowledge in these areas will improve patient care and curb the growing burden of HF in clinical practice. The articles included in this monograph have been written by authors who have considerable expertise in the given areas and have made a lot of effort in synthesizing complex and extensive literature to prepare their reviews. I would like to acknowledge their sincere efforts and time commitment in preparing their excellent contributions to this monograph. I would also like to thank Pamela Hetherington for her efforts in coordinating this issue in a timely manner. Finally, I would like to thank all my residents and fellows, as well as patients, who are a constant source of inspiration.

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