



Preface

Critical care nephrology



Laura M. Dember, MD
Guest Editor

Nephrologists are well known for thinking of the kidney as the “smartest” and most important of all human organs. This belief stems from the central role of the kidney in electrolyte and acid-base balance, fluid homeostasis, and elimination of toxic metabolites. Leaving aside the merits of the “beans” in comparison to such ancillary organs(!) as the heart, lung, and liver, all clinicians recognize how frequently renal impairment complicates almost all disease states. An understanding of renal physiology and pathology is imperative to the care of patients with multisystem disease. In no other inpatient setting is a sound understanding of renal disease as crucial as the intensive care unit (ICU). It is a reflection of the overlap between nephrology and other disciplines that the contributors to this issue include not only nephrologists, but also authorities in hepatology, rheumatology, critical care medicine, and pathology.

The articles in this issue cover a broad range of topics. The first article reviews the pathogenesis and prevention of the most common causes of acute renal failure (ARF) in critically ill patients. In addition, the authors discuss some recently recognized causes of renal failure that can occur in the hospital setting. Less common but potentially life-threatening causes of ARF are reviewed in separate articles on vasculitis and thrombotic microangiopathies. Dialytic support for ARF with a particular emphasis on continuous renal replacement modalities is addressed in the second article of the issue. In addition to currently available technologies, emerging extracorporeal therapies aimed at optimizing treatment of sepsis and liver failure are presented here in the article on hepatorenal syndrome. Our evolving understanding of the role of plasmapheresis in the treatment of renal disease is addressed in a separate article.

Disorders of salt and water balance, potassium homeostasis, and metabolic acidosis are each addressed in individual articles. In all cases, the focus is on the development and management of these disturbances in the ICU setting. Physiology that is inherently complex is presented with remarkable clarity by the authors of each of these articles. The metabolic abnormalities resulting from a variety of ingestions and the role of extracorporeal therapies in their management are discussed in the acute intoxications article. Critical care issues specific to the patient with chronic renal failure are reviewed in the final article of the volume.

The authors of these articles have provided reviews of relevant literature as well as practical information that should be of interest to intensivists and ultimately should contribute to the care of our most critically ill patients.

Laura M. Dember, MD
Renal Section
Boston University Medical Center
650 Albany Street, Room 504
Boston, MA 02118, USA