Fluid Overload

Diagnosis and Management

Volume Editors

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Preface

The condition of fluid overload is often observed in patients with heart failure and secondary oliguric states. In those conditions, a thorough assessment of the fluid status of the patient may help guide the therapy and prevent complications induced by inappropriate therapeutic strategies. For these reasons, it seems appropriate to collect a series of contributions in which the reader can start with the information relevant to the type of syndromes involved in the observed clinical picture, to progress subsequently towards the pathophysiologic foundations of such syndromes, to further advance in the analysis of diagnostic criteria and to finally conclude with the available therapeutic strategies. The present book represents a practical tool for physicians and professionals involved in the management and care of patients with combined heart and kidney disorders. It may also represent a reference textbook for medical students, residents and fellows dealing in everyday practice with fluid overloaded and oliguric patients. The book is an important source of information about new emerging diagnosing tools, therapies and technologies devoted to the treatment of patients with severe fluid-related disorders. Different conditions leading to fluid overload are described together with the possible diagnostic approaches and the therapeutic strategies. Various types of cardiorenal syndrome are discussed in detail with information concerning pathophysiology, biomarkers, pharmacological treatment and extracorporeal support. New definitions for heart failure, acute kidney injury and cardiorenal syndromes are reported to facilitate the reader in the process of understanding the complex link between the heart and the kidney.

The delicate concept of fluid balance is discussed with specific attention to the different components involved in the final composition of the body. Body hydration status is of remarkable importance, and bioimpedance vector analysis together with other techniques for the assessment of fluid status is discussed in depth. Pharmacological therapies together with extracorporeal treatments are presented in detail with special emphasis on critical care, cardiology, nephrology and emergency department populations. Pediatric populations are also taken into consideration.
The technology for extracorporeal ultrafiltration is described in detail, allowing the readers to appreciate the importance of this therapeutic approach in refractory oliguric states. The simplicity and effectiveness of modern equipment can make ultrafiltration a treatment easy to apply and safe to perform. Additional support to safety can be offered by chemical biomarkers, on-line blood volume monitoring and sequential bioimpedance determinations.

Based on all these considerations, the creation of a book covering all the important issues in the field as well as the available technology and methods represents an important project and a significant educational effort. We think that a book on this subject will constitute an important contribution in the field of cardiology and nephrology and may be particularly suited for being included in the series Contributions to Nephrology.

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