Handbook of Dialysis, 4th edition



Edited by John T Daugirdas, Peter G Blake, and Todd S Ing

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Reviewed by BL Jaber

This is the fourth edition of the Handbook of Dialysis, which has traditionally been carried and consulted regularly by the nephrologist in training and the busy clinical nephrologist. The editors have chosen a large panel of international authors with authoritative expertise in their assigned topics, while ensuring that the handbook maintains its original practical and relevant clinical focus. Throughout the four sections, the reader is treated to topics that have been carefully updated with the insertion of new references, and complemented by valuable figures and practical tables, along with helpful web links.

The handbook starts with a brief new section on chronic kidney disease management in accordance with the National Kidney Foundation's Kidney Disease Outcomes Quality Initiative (KDOQI) guidelines. The two chapters in this section cover the continuum of care prior to initiation of dialysis; patient education; treatment options, including the option not to dialyze; indications for initiating dialysis; and the debate on early or 'timely' dialysis initiation.

The second section deals with blood-based therapies and

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includes new chapters on more frequent hemodialysis and on convective techniques, namely hemofiltration and hemodiafiltration, given the interest of the international nephrology community in these treatment modalities. A chapter on the preparation of product water and hemodialysis solutions reviews the potential clinical benefits of ultrapure dialysate, comparing the purity standards of the Association for the Advancement of Medical Instrumentation with those of the European Pharmacopeia. Given the recent progress in the multidisciplinary optimization of vascular-access management, the vascular-access section is appropriately rewritten and divided into two chapters, one focusing on central venous catheters and one on arteriovenous access. The chapter on venous catheters is quite comprehensive and contains practical approaches to the management of complications of central venous catheterization. including a detailed approach to catheter-related bloodstream infections. Practical approaches to the prescription of acute and chronic hemodialysis are presented, followed by chapters on intradialytic complications and dialyzer reuse. The chapter on slow continuous therapies has also been extensively restructured, with particular attention to the latest modalities, including slow low-efficiency dialysis, as well as a technical overview of the latest dialysis equipment, anticoagulation, and the composition of dialysate and replacement solutions. This section culminates with two chapters on plasmapheresis, and

extracorporeal therapies for the management of poisoning.

The third section provides a comprehensive approach to peritoneal dialysis, a therapy that is used extensively in developing countries. This section starts with succinct chapters on the physiology and apparatus of peritoneal dialysis, and peritoneal access devices, and is followed by a practical approach to the prescription of acute and chronic peritoneal dialysis. Noninfectious complications are covered in two excellent new chapters dealing with the mechanical and metabolic complications of peritoneal dialysis. A chapter on the management of fluid overload is expanded to cover the latest developments in the treatment of ultrafiltration failure. The chapter on peritonitis and exit-site infections is based on some of the updated guidelines provided by the International Society for Peritoneal Dialysis.

The relatively large fourth section, which was probably difficult for the editors to limit, concisely covers clinically relevant problems pertaining to the care of the dialysis patient, including psychosocial issues, infections, endocrine disturbances, bone disease, cardiovascular disease, obstetric and gynecologic issues, and the nervous system and sleep disorders, to name a few. The chapter on bone disease provides a detailed overview of the KDOQI bone guidelines and is complemented by a description of the relatively new phosphorus binders and calcimimetics. A chapter dedicated to the management of diabetes is of extreme

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value in light of the high prevalence of this comorbidity in the dialysis population.

In summary, the editors have successfully updated the handbook, and managed to cover additional topics of interest to nephrologists worldwide. To accommodate these new topics, others have been dropped, including skin and eye disorders, which are occasional vexing problems encountered in the dialysis patient. On a final note, it is unfortunate that the text of this handbook is not available in an electronic format. This is crucial, as the use of handheld computer

devices can improve health-care delivery by bringing clinical knowledge to the bedside more efficiently. Nevertheless, until this additional feature becomes available, this pocket-size handbook will remain the daily companion of the nephrology fellow and the busy clinical nephrologist.

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