Perioperative Fluid Management

**Ehab Farag, Andrea Kurz (Editors). Springer International Publishing Switzerland 2016.
ISBN 978-3-319-39139-7 / 978-3-319-39141-0 (eBook)**

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Received: 27 November 2016 / Accepted: 6 December 2016 / Published online: 12 December 2016
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This first edition of the textbook “Perioperative Fluid Management” deserves a place on the bookshelf of every anesthesiologist interested in the most current, and ongoing, developments in fluid management. In 407 easily digestible pages, a wide variety of aspects are covered that provide both a useful revision of known principles combined with amendments to theories previously ‘set in stone,’ such as the Starling principle.

The book is divided into two parts. The first, comprising 13 chapters, is the Fundamentals of Fluid Management. The opening chapter, by Elizabeth A.M. Frost, provides an excellent detailed history of fluid therapy. Rather than regurgitating the oft-reported management of cholera victims according to Thomas Latta, Frost displays an interest in bodily fluids extending as far back as Mesopotamia during the fourth century BC and the devastating effect of practices such as blood letting during the 19th century. She offers the staggering revelation that George Washington died after having more than 3½ L of blood removed, which was considered acceptable practice at the time. In the light of that historical tidbit, one is forced to consider how one’s own practice will be viewed in years to come.

The first part of the book continues with a detailed revision of the Starling principle, a physiological theory so engrained in physiology and medicine that it will likely be continued to be published in its original form for many more years before the revision becomes standard. This revised

principle has significant relevance for both patient management and interpretation of the results of clinical studies of fluid management. Some physicians may be tempted to skip through the detailed physiology presented. Do not make that mistake. It provides lessons in physiology, history, and insight into future developments in fluid therapy. In addition to the physiology of fluids, methods are reviewed concerning the evaluation of fluid status and the necessity of fluid administration. These methods, although gaining in popularity, remain underused as resistance to them is still to be overcome and developments are still to be achieved. A discussion of mean systemic filling pressure is a welcome inclusion as, although not indisputable, the quantitative measurement of volume status is definitely a hot topic.

The second part of the book provides a useful context for the application of newly acquired, or refreshed, scientific background information. Fairly standard case scenarios for fluid management in the areas of major orthopedic surgery, colorectal surgery, septic shock, liver resection, major spine surgery, and following subarachnoid hemorrhage in the neuro-intensive care unit are presented. These scenarios allow the reader to judge, and hence adapt, his or her own practice in light of the information presented. However, the details concerning thromboelastography in liver surgery, although important, are probably misplaced here.

The authors involved in this first edition are known experts in their fields, thereby lending additional weight and influence to the opinions presented. Those who work in anesthesia, intensive care, and the rapidly evolving field of perioperative medicine will recognise the contributions from expert authors such as Paul Marik in goal-directed

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fluid management and Monty Mython in the field of enhanced recovery programs.

In summary, this book provides a comprehensive up-to-date review of actual knowledge in fluid management, demonstrations of how that knowledge can be applied to optimise patient management, and insight into possible future developments. We recommend this book to anesthesiologists in training as well as those in senior

positions who are interested in keeping their practice modern and in line with current scientific knowledge.

Conflicts of interest None declared.

Editorial responsibility This submission was handled by Dr. Hilary P. Grocott, Editor-in-Chief, *Canadian Journal of Anesthesia*.