

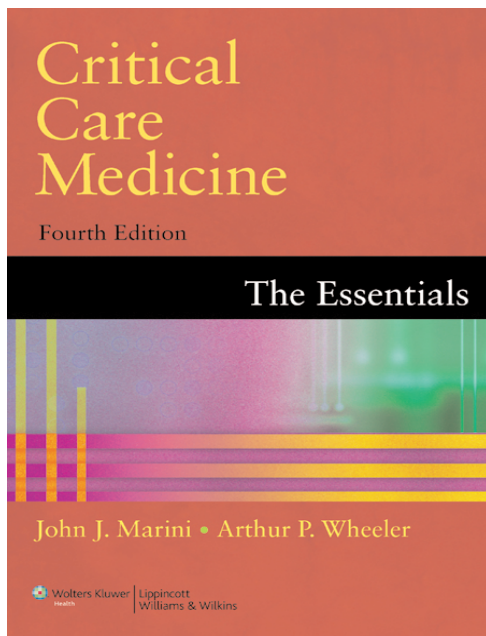
BOOK REVIEW

Critical Care Medicine. The Essentials. 4th Edition.

Edited by J.J. Marini and A. Wheeler

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In this fourth edition of *Critical Care Medicine*, the authors have laid out a thorough overview of intensive care unit (ICU) principles, written for practising clinicians, and principally aimed at students and residents on critical care rotations. The authors correctly suggest that this is a book to be read at leisure to enhance the understanding of the physiological principles essential for ICU practice: these will always remain, whereas protocols and recommendation may well come and go. The benefits of the joint authorship (there are only a few chapters with contributing authors) undoubtedly gives the book literary flow and lack of repetition, although it may also have its limitations.

The book is divided into two sections: the first includes chapters covering critical care techniques and methods; the second, acute medical and surgical emergencies common in everyday ICU practice. Useful key points are listed at the start of each chapter, and although references are not referred to within the text, useful suggested further reading is included.

Within the haemodynamic chapters, the chapter on monitoring stands out. Pulmonary artery catheter usage is described over 20 pages and, as this is an increasingly less used tool, the details and tips from the experienced authors are invaluable. There is, however, much less information on echocardiography; however, this is available in other books.

The airway intubation chapter is well structured. As UK-based practitioners, it is interesting to note some of the differences in the techniques used in the USA, *e.g.* using ketamine and etomidate commonly as induction agents, and the more liberal use of intubating stylets. The basic principles of intubation are well covered. A 'failed intubation' flow diagram would have been a useful addition to clarify this vital aspect of airway care for the reader. There is a lack of a clear description of pre-oxygenation in the apnoeic/rapid sequence intubation sequence, and perhaps a missed opportunity for the physiological explanation of the technique. There is a very good description of the blind nasal intubation technique.

The ventilation chapter fluently describes the different positive pressure modes, and discusses the 'pros and cons' of each. The

risks and complications of mechanical ventilation are described in detail. We particularly liked the section on physiological principles of chest drainage and chest drain suction, and considerations for the unweanable patient. There could perhaps have been more on ARDS rescue therapies, including ECMO, although these are of course relatively new areas under ongoing research.

The chapter on ICU imaging was a poignant reminder of something we now take for granted: that the 'digital revolution' occurred not so long ago. Before this, viewing films was far less satisfactory! It highlights the usefulness of a good quality, plain chest radiograph, and indications and useful diagnostic information gained by the use of chest computed tomography, although, this is not without risks relating to patient transfer and contrast-induced nephropathy.

Acid base, fluid and electrolyte physiology and disorders are described in detail: these are essential background knowledge to all ICU illnesses. The chapter on blood has been well updated, reminding us that 'no blood is as good as your own' and outlines conservation of blood products, increasingly used as demand outstrips supply. The brief chapter on pharmacotherapy includes useful sections on disease-specific pharmacokinetics. The chapter on nutritional assessment and support is a controversial area well outlined, and not yet convincingly backed up by large studies. A clear overview of the physiological principles and available current evidence in various ICU syndromes is presented with clear tables.

In the chapter on general supportive care, a nice summary of the elements of bedside evaluation makes the sad, but true, point that 'trust in doctors has eroded somewhat' over the years, and emphasises the importance of frank discussions with realistic but positive attitudes where appropriate. The point is made that a 'serious' tone is perhaps not always needed, it is true that humour does wonders in some cases to bridge the gap between caregiver and vulnerable care recipient.

No ICU textbook would be complete without an overview on quality improvement and, unfortunately, cost control, with the qualities of ICU leadership emphasised in terms of patient-oriented goals and daily multidisciplinary rounds, *etc.* It makes the point that nursing costs comprise the bulk of ICU spending, a point we were unaware of but are not surprised by: good nurses certainly make all the difference! It touches on the topical subject of resident on-site cover by ICU seniors, with only a fifth of US hospitals having on-site critical care physicians, despite improved outcomes in 'closed' units.

Most of the important ICU illnesses are covered in appropriate detail in the second section, with co-authored detail on acute coronary syndromes and chest trauma. Venous thromboembolism is reviewed, although the potential role for serum biomarkers in assessment is not discussed. The chapter on ventilatory failure includes specific pathologies and the consideration of ventilatory management in each (asthma, chronic obstructive disease and respiratory pump failure) is useful. The chapter on clotting disorders includes useful summary tables. Overall, almost all ICU pathologies are thoroughly covered, although Guillain-Barré syndrome and, perhaps surprisingly, obstetric ICU emergencies, are not.

Overall, this is a well written, enjoyable reference book with an easy reading style. It is intended as a learning manual rather than a quick reference guide and is full of useful practical tips gained by those with vast clinical experience.

L.C. Price and J.R. Dick
London, UK