

REVIEWS OF EDUCATIONAL MATERIAL

James C. Eisenach, M.D., Editor

Critical Care of the Surgical Newborn. Edited by Don K. Nakayama, Carl L. Bose, Nancy C. Chescheir, and Robert D. Valley. New York, Futura Publishing Company, 1997. Pages: 610. Price: \$150.00.

The modern practice of critical care medicine has historically involved medical and surgical specialty physicians, including anesthesiologists, nurses, pharmacists, and respiratory care practitioners. Most care providers for critically ill or injured patients believe that this multidisciplinary approach facilitates care and improves outcomes. The collaborative effort of the multidisciplinary editors of *Critical Care of the Surgical Newborn* is an excellent example of this practice. The perinatology care team (perinatologists, neonatologists, pediatrics surgeons, and anesthesiologists) at the University of North Carolina at Chapel Hill have compiled, to my knowledge, the first comprehensive textbook devoted exclusively to the care of the critically ill newborn with surgical emergencies.

The text is divided into four sections: Part I: General Treatment; Part II: General Pediatric Surgery; Part III: Neurological Surgery; and Part IV: Urologic Surgery. Part I includes 11 chapters that discuss topics pertinent to the care of patients with neonatal surgical emergencies. I particularly appreciated the chapters "Respiratory Physiology and Management of Respiratory Disorders" and "Cardiovascular Anomalies." Each was well-organized with an extensive review of many practical issues of anatomy, physiology, and pharmacology. "Ethics and Decision Making in Surgical Treatment of the Newborn Infant" is an informative chapter with a useful clinical prognosis classification system. The chapter "Anesthesia and Postoperative Pain Management" provided a nice review of many of the common issues faced by the anesthesiologist caring for the neonate either intraoperatively or postoperatively. Space constraints obviously limited the discussion in some areas; however, anesthesiologists will benefit most from information in the surgical sections of the book. I thought the chapter "Infections" was excessive for the needs of the intended audience.

The three subsequent sections of the book are devoted to specific surgical lesions. The authors and editors in general have done a nice job of maintaining a constant format for each of the remaining 28 chapters. The chapters are organized to begin with a discussion of prenatal diagnosis followed, in order, by perinatal management, the diagnostic workup at birth, and the preoperative treatment by neonatologist, intraoperative care by anesthesiologist and surgeon, and the postoperative care. Unfortunately, in the last two (neurologic and urologic) surgical sections, the editors took the discussion of anesthetic management for a specific lesion out of their respective chapters and consolidated them into a single chapter for each section.

The book is not without flaws. There are occasional typographic errors throughout the text. Perhaps the most significant error was the apparent omission of the first table in Chapter 10, "Anesthesia and Postoperative Pain Management in the Newborn." In the introductory paragraph, the author refers to a table providing an overview of the major issues related to the anesthetic care of neonatal patients. Unfortunately, the referenced table actually contains information regarding the approach to intubation of the newborn. Although I agree that airway management is the first concern of any anesthetic plan for a newborn, there clearly are other major issues worthy of mention in this table that were subsequently reviewed in the remainder of the chapter. The contents would have been enhanced with the inclusion of nursing

care issues in the preoperative and particularly postoperative periods.

As succinctly stated in the preface, the intended audience of this text is large, including high-risk obstetricians and perinatologists, neonatologists, and anesthesiologists and surgeons caring for neonates with surgical emergencies. Furthermore, a trainee in these respective fields and the general pediatrician, family practitioner, and specialty nurse may find useful information in portions of this text. The book is of solid construction (I have been hauling this book around the country with me for 6 months without evidence of wear), the contents and index are complete, and chapters generally are well-illustrated (particularly the surgical procedures). As is commonly seen, some of the X-rays reproduced have lost contrast, making findings difficult to appreciate. The price of \$150 may be a little steep, but most readers will find the expense justified after they have reviewed the book.

In summary, *Critical Care of the Surgical Newborn* is the first comprehensive text devoted to this patient population and will likely become a useful reference text to the library of trainees and practitioners who provide care to newborns with surgical emergencies.

Lynn D. Martin, M.D.

Associate Professor of Anesthesiology and Pediatrics
University of Washington School of Medicine
Director
Pediatric Anesthesia & Critical Care Medicine Fellowship
Programs
Children's Hospital and Regional Medical Center
Seattle, Washington 98105
lmart@u.washington.edu

(Accepted for publication December 5, 1998.)

The Handbook of Critical Care Drug Therapy. By Gregory M. Susla, Henry Masur, Robert E. Cunnion, Anthony F. Suffredini, Frederick P. Ognibene, William D. Hoffman, James H. Shelhamer. Baltimore, Williams & Wilkins, 1998. Pages: 436. Price: \$24.95.

Critical care is a multidisciplinary activity that encompasses all major organ systems and medical specialties. Staying current with the pharmacology used in critical care has become increasingly difficult because of the continued development of new drugs. This handbook was designed to be a readily available reference to provide the necessary information to select an appropriate drug and dosage for a specific situation. The book consists of 13 chapters (acute resuscitation; anesthesia; cardiovascular therapies; pulmonary therapies; renal, electrolyte, and acid-base disturbances; endocrine; gastroenterology; hematology; neurology and psychiatric therapeutics; infectious disease; allergy; poisonings; drug monitoring) and three appendices (intravenous medication administration guidelines; intravenous to oral conversions; oral drug doses). As can be seen by the chapter titles, the book discusses all areas of pharmacology relevant to critical care. Unfortunately, the book sometimes loses sight of its basic focus on drugs, so it lists tables that have little direct pharmacologic implications, such as tension pneumothorax, tamponade, tracheal intubation techniques, tumor lysis syndrome, nutrition, blood component therapy, and trans-

fusion reactions. In addition, some of the tables appear to be relevant primarily to patients outside of the intensive care unit (ICU); the book may be particularly valuable for the new specialty of *hospitalists*.

The format of the book consists of tables of two types: one lists drugs and their indications and the other lists diseases and the available drugs. Because it is difficult to discuss drug therapy outside of the context of specific diseases, the complementary presentation of drugs in both types of tables is extremely useful. For example, one table lists the available antiarrhythmic agents and a second table provides a listing of drugs according to the specific arrhythmia. The major issue in critical care pharmacology frequently involves deciding the best choice among multiple available drugs. Unfortunately, the authors do not always prioritize the available drugs and frequently do not state whether the list is actually a prioritized list. For example, the table "Seizures: Urgent Management" provides what appears to be a prioritized list (thiamine, dextrose, diazepam, phenytoin, among others), but the table "Seizures: Maintenance Therapy" on the adjacent page lists 11 anticonvulsants in alphabetical order.

The tables frequently have extensive comments that are invaluable. For example, comments on adenosine therapy include the decrease in required dose when administered *via* a central venous catheter and the increased and decreased effects in patients receiving dipyridamole and theophylline, respectively. The multiple drugs and comments result in crowded tables, and the authors have chosen a type font (approximately size 8) that preserves readability while allowing tables to fit within the width of a single 4.5-inch page. The index is excellent, allowing the reader to find all references to a specific drug. However, because many drugs have more than 20 citations, a notation as to which pages focus on that particular drug would be a helpful addition.

The authors either are or have been associated with the Critical Care Medicine Department of the National Institutes of Health, Bethesda, Maryland. By their nature, handbooks tend to have an institutional bias and this is particularly common when multiple possible therapeutic alternatives exist. However, the authors appear to have provided a balanced presentation throughout the book (or else we share the same biases).

To determine the usefulness of the handbook, I carried it with me during my most recent ICU rotation. The book readily provided information for almost all drugs, and the list of drug doses and the adjustments for renal and hepatic dysfunction were valuable. The listing of drugs was comprehensive, with only some minor omissions (ethacrynic acid from the diuretic category; inclusion of tranexamic acid but not aprotinin for prevention or treatment of anticoagulation). For vancomycin-resistant *Enterococcus* the book not only listed approved drugs, but also provided the phone number to contact for the investigational drug Synercid (Rhône-Poulenc Rorer, Collegeville, PA). However, the book did not clearly differentiate among the available fluoroquinolones, even though the different agents have specific indications. Atrial fibrillation is the most common dysrhythmia in the ICU. The book provides a list of antiarrhythmic drugs and a separate page with a prioritized list for initial treatment and prevention of recurrence. For the management of hypertension, a common problem in the ICU, one table listed available drugs, one table listed drugs of choice in different settings, and two appendices discussed oral drugs. However, I was not convinced that the physician who did not already have an approach to the treatment of perioperative hypertension would be able to choose an initial drug and then convert to oral therapy on a subsequent day. Similar to many other textbooks, the handbook provides the standard tables regarding vasoactive therapy. Unfortunately

hemodynamic treatment for septic shock, a leading cause of death in the ICU, was discussed in a single sentence, stating that the treatment is dopamine up to $20 \mu\text{g} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$ followed by norepinephrine. Other agents such as epinephrine, dobutamine, phenylephrine, and milrinone were not mentioned in this section, nor was there discussion regarding the need to maintain cardiac output.

This second edition of the handbook is almost twice the length of the first edition. In general, the two editions discuss the identical topics and have many tables with no or only minor changes. The increased length of the second edition is a combination of the increased number of available drugs and the use of a larger type size and other formatting changes. A comparison of the two editions demonstrates the significant advances that have occurred in critical care pharmacology, and the second edition is extremely up-to-date.

In summary, this handbook succeeds in presenting a wealth of information regarding critical care pharmacology in a relatively inexpensive, compact format. It is equally useful on the reference shelf and in one's pocket.

Ronald G. Pearl, M.D.

Department of Anesthesiology
Stanford University School of Medicine
Stanford, California 94305

(Accepted for publication February 3, 1999.)

Clinical Scenarios in Intensive Care. By Rona Patey and Nigel Webster. New York, Oxford University Press, 1998. Pages: 106. Price: \$31.95.

This book is a collection of 21 critical care medicine case histories, each accompanied by questions and recommendations for further reading. The authors note that there are numerous volumes detailing the process of intensive care and the knowledge on which it is based, but few books with a problem-oriented presentation. They state that their book offers a "framework on which to base the practice of intensive care." The cases they present encompass common intensive care problems, such as myocardial infarction, asthma, sepsis, renal failure, and adult respiratory distress syndrome. Less commonly encountered conditions, such as tetanus, are also included. Each case is supported with hemodynamic, laboratory, and radiologic data.

This is a slim volume (106 pages) and can be read in one sitting. However, working through all the questions requires significant effort. There are a few commonly encountered intensive care problems that are not discussed (the most obvious is pulmonary embolism) and there is, in general, less emphasis on infectious disease and antibiotic therapy than is often encountered in daily practice. Nevertheless, the questions accompanying the case descriptions are comprehensive, covering diagnosis, pathophysiology, and treatment; trainees who use this book as intended by the authors will be better prepared for the practice of critical care medicine. However, those who are interested in purchasing this book need to be aware that it is by no means self-contained, nor was this intended by the authors. The book provides the cases and the questions but the reader has to provide the answers. Each chapter has references, most being review articles from the internal medicine, surgery, and anesthesiology literature, and using this book as intended will require substantial time in a library. I believe that the book would have been more useful