

## BOOK REVIEWS

Carol A. Hirshman, M.D., Editor

**Anesthetic and Obstetric Management of High-risk Pregnancy.** BY S. DATTA. St. Louis, Mosby Yearbook, 1991. Price: \$79.00.

Anesthetic management of the high-risk parturient woman requires knowledge of potential medical, obstetric, fetal and neonatal, and anesthetic complications that may arise in the peripartum period. This book, directed to "front-line physicians and medical caretakers of high-risk pregnancies," attempts to serve as a reference for obstetric, medical, and anesthetic management.

The text consists of 30 chapters, 28 of which were co-authored by at least two specialists, in most cases an obstetrician and an obstetric anesthesiologist. The first 4 chapters primarily involve the fetus and include monitoring, fetal diseases and abnormalities, and fetal manipulations. The last 2 chapters discuss fetal distress and intrauterine fetal death. The intervening chapters describe management of patients with a variety of medical, obstetric, and fetal problems.

For the most part, this book fulfills its objectives. Each chapter includes information about "cause, pathophysiology, and obstetric treatment" of the individual problems, as well as anesthetic management. Numerous figures and tables assist the reader with understanding specific concepts. Most of the references are current and informative. Redundancy of information, though present, has been kept to a minimum for a text this size. Although the idea of chapters co-authored by different specialists is innovative, the scope of information, which includes medical, obstetric, and anesthetic management of numerous problems, is somewhat too extensive for one text. However, because explanations of anesthetic management generally are complete, this book remains worthwhile for those who practice obstetric anesthesia.

The chapters relating to the fetus are particularly good. Discussions of placental gas exchange, fetal heart rate changes, and anesthesia for fetal distress are clinically relevant and easy to understand. These sections require no prior knowledge of the field. Chapters on genetic and metabolic disease and fetal congenital abnormalities, though well written, are of less interest to obstetric anesthesiologists.

The chapters involving medical and obstetric problems are more variable. The chapter on respiratory diseases contains a wealth of recent information as well as basic physiology. Likewise, the chapter on postpartum hemorrhage contains an excellent review of the pharmacology of oxytocic agents. In contrast, the chapter on cardiac diseases describes basic physiology well, but discussions of anesthetic management of specific cardiac diseases tend to be limited. In addition, a table of recommended protocols for lethal dysrhythmias does not agree with recent American Heart Association guidelines.

Most areas of recent controversy, such as monitoring of preeclamptic patients, anesthetic management of patients undergoing vaginal birth after cesarean section, and the use of regional anesthesia in anticoagulated or febrile patients, are presented in a balanced fashion and are discussed in detail. Some additional areas of controversy, such as the use of epinephrine in test doses for epidural anesthesia in preeclamptic patients, are not mentioned.

This book includes a number of chapters, such as those discussing the pregnant teenager, orthopedic problems, and substance abuse, that are not found commonly in similar texts. These chapters are uniformly informative and interesting for practitioners in this field.

In summary, this text contains a wealth of information important for anesthesiologists who care for high-risk parturient patients. The chapters co-authored by different specialists provide unique perspectives into the complete medical care of these patients. Since no other recent texts serve as such a complete reference, this one provides a valuable

addition to the library of anyone involved in high-risk obstetric anesthesia.

KAREN S. LINDEMAN, M.D.

*Department of Anesthesiology*

*The Johns Hopkins Hospital*

*Baltimore, Maryland 21205*

**Anesthesia.** Third Edition. EDITED BY R. D. MILLER. New York, Churchill Livingstone, 1990. Pages: 2420 in two volumes, plus 155-page index in each volume. Price: \$175.00.

Few would argue that the first two editions of this textbook set a "standard" in North America for textbooks of anesthesiology. In recent years several competitors have challenged this position, most notably the single-volume *Clinical Anesthesiology* edited by P. G. Barash, B. F. Cullen, and R. K. Stoelting, published in 1989, and selling for \$99. Although the proliferation of subspecialty textbooks has made the purchase of general textbooks less appealing to some, general reference textbooks are still preferred by many residents and departmental libraries.

The authorship reads like a "who's who" in American anesthesiology, with numerous department chairmen and full professors from around the country. There are twelve more chapters than in the second edition, and the authorship has changed for many. The pages are larger than previous editions, making the text easier to use and permitting a reduction from three to two volumes without compromising "readability." The editors have been careful to space graphs and figures generously and evenly throughout the text, and we preferred the format to that of *Clinical Anesthesia*, in which the lines are more closely spaced.

Gone are the days when the resident could sit down and read a "standard" text from cover to cover as a preexamination review. Each chapter of *Anesthesia* strives to be a definitive up-to-date critical summary, written in a style compatible with scientific literature and thoroughly referenced. Reading this textbook would take the entire period of residency training; rather, it should be viewed as a "reference" textbook. This function is aided by the excellent index, repeated in full in both volumes. Our assessment of the various parts of the book, viewed from the perspectives of a resident preparing for examinations and a practicing clinician, is as follows.

The introduction to the usually intimidating subjects of pharmacokinetics and pharmacodynamics is easily digestible; figures and equations used to explain concepts such as time constants, drug clearance, and volume of distribution are clear and easily understandable. The importance of logarithmic scales in these subjects is nicely presented in graphs showing the same data plotted side by side on linear and log scales.

The five chapters on inhaled anesthetic agents are well organized and integrated. Whereas E. I. Eger's discussion of uptake and distribution is excellent both for its clarity and clinical relevance, the section on closed-circuit anesthesia was surprisingly brief, considering the scope of the subject and the size of the book. The chapter on inhaled anesthetic delivery systems has been rewritten by a new author and now includes a detailed description of a modern anesthesia machine with excellent illustrations, providing a sound understanding of safety features as well as limitations. The detailed description of the copper kettle vaporizer, which appears in the second edition, has been deleted (at last!).

There are four chapters on intravenous anesthetic agents, three of which are new and which replace one chapter in the second edition. All are well illustrated and extensively referenced (922 references for narcotic anesthetics!). A new chapter on intravenous anesthetic delivery systems describes the pharmacokinetic basis of continuous drug infusion administration with modern infusion pumps.

The seven-chapter section on physiology and anesthesia is similar to that in the second edition. The chapter on cerebral physiology has been reorganized and expanded and includes a table listing the frequently used abbreviations—a credit to the editors' responsiveness to reader feedback. In the chapter on respiratory physiology some of the graphs combining variables were rather difficult to understand.

The discussion of anesthetic risk has been expanded and rewritten, and M. F. Roizen's excellent chapters on preoperative evaluation and concurrent diseases are updated with much practical information. The chapter on preoperative medications has been rewritten by a new author.

A new section of the book, devoted to monitoring, is excellent; the single 50-page general chapter that appeared in the second edition has been replaced by almost 300 pages in ten chapters, most of which are entirely different or by new authors. The first chapters on principles of monitoring instrumentation and monitoring depth of anesthesia, written by experts with recent related scientific publications, are particularly notable, as is a very complete, readable, and well-illustrated section on echocardiography.

There are eight chapters on anesthesia techniques, including new chapters entitled "Airway Management," "Monitored Anesthesia Care," and "Management of General Anesthesia." These are excellent overviews for both the beginner and the experienced clinician. Included in this section are three chapters about regional anesthesia written by authors new to this edition. "Perioperative Fluid Therapy" has been expanded from two to three chapters, now including a separate chapter on autotransfusion and hemodilution. A. H. Giesecke's classic, easy-reading chapter on crystalloids has been replaced by a more extensive chapter on both crystalloids and colloids by A. S. Tonnesen, presenting colloids in a more favorable light.

Many of the chapters on subspecialty management are revisions of those appearing in the second edition. Carotid endarterectomy is now covered in the vascular surgery chapter rather than in its own chapter and refers to information in other chapters for completeness. Some of the revisions are simple updates (as in the previous edition, the chapter on eye, ear, nose, and throat surgery is virtually devoid of figures), whereas others are extensively revised. The chapter on thoracic surgery appears to be about 25% larger, drawing extensively upon figures from the author's own textbook. There are now chapters on anesthesia for pediatric cardiac surgery, orthopedic surgery, and anesthesia in remote locations. Two chapters on pain are included: an update of T. M. Murphy's "Chronic Pain," and a new brief chapter by L. B. Ready on acute postoperative pain management.

The chapter on cardiopulmonary resuscitation in the critical care section is quite different from that of the previous edition. Less emphasis is given to airway management and respiration, and discussion of drug therapy for dysrhythmias is contained within the text rather than under separate subheadings. We found it did not read as easily as the earlier version. The chapters on critical care cover an immense amount of ground in 190 pages, at a level appropriate for the anesthesia resident "on rotation." In contrast, *Clinical Anesthesia* has one 22-page chapter on critical care.

We were surprised at the omission of a chapter on the immune response and allergic reactions. Such a chapter (18 pages) is found in *Clinical Anesthesia*; this subject is covered very briefly in different chapters in *Anesthesia*. Similarly, where *Clinical Anesthesia* devotes a chapter to patient positioning, *Anesthesia* covers the subject only as it relates to specific procedures or problems.

The concluding section of the book contains several new chapters on "Ancillary Responsibilities and Problems." In "Operating room Management," emphasis is on management and contentious issues like accreditation, cost control, scheduling, and utilization. Chapters on quality assurance, teaching of anesthesia, and environmental safety (including chemical dependency) complete this section.

There can be no doubt that *Anesthesia* is still a definitive textbook of anesthesiology. The third edition is more complete and better organized than either preceeding edition, and the quality of the presentations is exceptionally high. When compared with *Clinical Anesthesia*, the third edition of *Anesthesia* is larger, easier to read, and more detailed in many (but not all) areas. It contains discussions of some subjects not included in the former (e.g., many of the subjects in the last chapters). We highly recommend this book to all departmental libraries and to those individuals willing to invest \$175 in a textbook of anesthesiology.

JACK S. SHANEWISSE, M.D.  
*Fellow in Anesthesiology*

JAMES G. RAMSAY, M.D., F.R.C.P.(C.)  
*Associate Professor of Anesthesiology  
Emory University School of Medicine  
1364 Clifton Road NE  
Atlanta, Georgia 30329*

**Intraoperative Use of Echocardiography.** EDITED BY NORBERT P. DEBRUIJIN AND FIONA M. CLEMENTS. Philadelphia, J. B. Lippincott, 1991. Pages: 225. Price: \$49.95.

The increasingly widespread use of intraoperative echocardiography over the past several years has resulted in only a few books on the topic. This monograph from the Society of Cardiovascular Anesthesiologists provides an excellent basic introduction to the use of both epicardial and transesophageal echocardiography during the intraoperative period. This book is directed at anesthesiologists, cardiac surgeons, and cardiologists interested in using intraoperative echocardiography as a monitor and diagnostic tool.

The text is divided into ten chapters. Most of the subject matter is directed at the use of transesophageal echocardiography. Two of the chapters, however, address the use of epicardial echocardiography.

The book opens with a history of transesophageal echocardiography, the safety of its use, the future of the imaging modality, and ideas for how best to educate the anesthesiologist in its use and interpretation. The second chapter provides a comprehensive and succinct review of the basic concepts of echocardiography; this chapter is easy to read and understand, with well-chosen illustrations. The following three chapters review the use of transesophageal echocardiography for evaluating myocardial ischemia and assessing ventricular function. The chapter "Detection of Intraoperative Myocardial Ischemia" is an excellent review of the advantages and limitations of transesophageal echocardiography for detecting myocardial ischemia. The two chapters that follow review the assessment of cardiac function. Some of the material tends to be repetitive but is necessary to explain the topic if each chapter is to stand alone. It may also be advantageous to those not familiar with the subject matter and its terminology. The chapter "Doppler Color-flow Imaging" is an easy-to-understand review of this modality, and is followed by the chapter "Evaluation of Valvular Dysfunction and Repair by Echocardiography," which describes the utility of Doppler color-flow imaging in defining the pathophysiology of the heart valves. Unfortunately, the color plates referred to in these two chapters were placed in the middle of another chapter, with no reference in the Table of Contents as to their location.

The use of epicardial echocardiography is described in chapters 8 and 9. The uses for epicardial echocardiography during surgery for