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Anesthetic Pharmacology: Physiologic Principles and Clinical Practice. Edited by Alex S. Evers, M.D., and Mervyn Maze, M.B., Ch.B. Philadelphia, Churchill Livingstone, 2004. Pages: 1,000. Price: \$99.00.

The new textbook *Anesthetic Pharmacology: Physiologic Principles and Clinical Practice*, ably edited by Alex S. Evers, M.D. (Chairman, Department of Anesthesiology, Washington University School of Medicine, St. Louis, Missouri), and Mervyn Maze, M.B., Ch.B. (Sir Ivan Magill Professor of Anesthetics, Imperial College of London, London, United Kingdom), is an impressive addition to the anesthesiologist's library. For nearly two decades, the standard text covering pharmacology and physiology as they relate to the practice of anesthesiology has been Stoelting's *Pharmacology and Physiology in Anesthetic Practice*. In contrast to that volume, *Anesthetic Pharmacology* is a multi-authored work with 110 contributors, most of whom are well-recognized authorities writing in their field of expertise. With so many authors, there is less cohesion and more repetition than in a single-authored text; however, the excellent breadth and detail of this book could only be accomplished with the outstanding team of experts assembled by the editors.

The textbook has three sections: I. Principles of Drug Action (7 chapters, 118 pages), II. Physiologic Substrates of Drug Action (15 chapters; 245 pages), and III. Pharmacologic Basis of Clinical Practice (32 chapters, 505 pages). The first two sections provide basic principles of pharmacology and physiology, and the third section covers the clinical pharmacology of major drug classes. Section I (chapters 1-7) is a concise but thorough review of basic pharmacokinetics and pharmacodynamics and includes current topics such as pharmacoeconomics and pharmacogenomics. Section II covers physiology at both the cellular and systems levels. Section III presents clinical pharmacology by drug classification (e.g., "Inhalational Anesthetics"), use, or target organ (e.g., "Myocardial Protection"). This organization results in some overlap between the two background sections and the chapters on clinical practice. The division of part III into chapters based on specific drug uses also results in some repetition for drugs employed in multiple contexts. For example, β blockers are covered with similar tables in chapters 34 ("Sympatholytic Drugs"), 35 ("Antiarrhythmic Agents"), 36 ("Agents Used to Treat Myocardial Infarction"; *n.b.* error in esmolol dosing in table 36-1), and 38 ("Myocardial Protection"). In other cases, the clinical practice chapter contains even more scientific detail than the basic physiology chapter (e.g., the role of endocannabinoids in synaptic transmission is discussed in detail in chapter 29 ("Analgesics: Cannabinoids") but goes unmentioned in chapter 9 ("Synaptic Transmission"). However, these problems do not detract from the overall utility of the book.

There is a uniform feel throughout the book; each chapter follows the same basic outline and is subdivided into sections on Mechanisms of Action, Clinical Pharmacology, Adverse Effects, Practical Aspects of Drug Use, and Dosage and Administration. Unfortunately, this format was not consistently followed, and many authors wandered from the editors' well-organized chapter structure. The book is designed as "A Companion to *Miller's Anesthesia*" to provide "the depth of pharmacologic information to satisfy the needs of the sophisticated clinician." It is indeed a worthy companion to *Anesthesia* in dimensions and heft (7.4 lb), but some form of cross-referencing between the texts would greatly facilitate this function.

There are a few notable omissions for a complete textbook of anesthetic pharmacology. For example, the anesthetic implications of statin therapy for hyperlipidemia and antiviral therapy for HIV infection and their effects on cytochrome P-450-mediated drug interactions are not discussed despite the prevalent use of these drugs by patients treated by anesthesiologists. Other topics that receive short shrift include dantrolene and treatment of malignant hyperthermia, proper-

ties of commonly used and abused opioids (e.g., codeine, oxycodone, hydromorphone, methadone, heroin), depth of anesthesia monitoring, anesthetic effects on electrophysiologic monitoring, and the physiology and pharmacology of spinal and epidural anesthesia, *inter alia*. Cross-references with *Miller's Anesthesia* might obviate the need for duplicate discussion of many of these topics.

As with many works of this size, the quality of individual chapters is variable, but there are many gems. Sections I and II are consistently excellent, whereas section III is more variable. Chapter 25 ("Sedatives, Anxiolytics, and Amnestics") is superbly written and provides a thorough overview of the molecular, cellular, and clinical pharmacology of benzodiazepines (although providing fractional coefficients may be overly ambitious). Similarly, chapter 52 ("Red Blood Cell Substitutes") is an excellent overview of an important topic and provides a thoughtful and reasoned assessment of the current state of clinical relevance and applicability. In contrast, parts of chapter 44 ("Antimotility and Antisecretory Agents") and chapter 51 ("Chemotherapeutic Agents") read like a selection of package inserts (are dosing schedules of chemotherapeutic agents important to most anesthesiologists?). The editors cannot possibly check every fact or citation, and some errors have crept in. Thus, it is unlikely that bronchospasm after rapacuronium administration is due to histamine release as suggested in chapter 33, but rather is the result of selective muscarinic receptor type 2 blockade; fortunately, such mistakes seem to be rare. Minor errors are present throughout the text (including the title page) and citations (e.g., two of the three authors are listed incorrectly in the figure legend on page 248). There is also some inconsistency in terminology (e.g., adenylate, adenylyl, and adenylyl cyclase all appear). The immense time and effort required to produce this book is likely the reason for the paucity of references later than 2001.

Despite these concerns, readers will find *Anesthetic Pharmacology* a valuable reference irrespective of level of training or experience. It certainly deserves a place in every anesthesia departmental library and is highly recommended for those interested in staying on the leading edge of the specialty. This represents a fine start to what we fully anticipate will become the classic text on pharmacology and physiology as they relate to the practice of anesthesiology.

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Adult Perioperative Anesthesia: The Requisites. Edited by Daniel J. Cole, M.D., and Michelle Schlunt, M.D. Philadelphia, Elsevier Mosby, 2004. Pages: 460. Price: \$79.95.

Adult Perioperative Anesthesia is another volume in the *Requisites of Anesthesiology* series, edited by Roberta Hines. This volume is edited by Daniel Cole, M.D. (Assistant Professor, Department of Anesthesiology, Mayo Clinic, Scottsdale, Arizona), and Michelle Schlunt, M.D. (Assistant Professor, Department of Anesthesiology, Loma Linda School of Medicine, Linda Loma, California). The hardcover text contains 30 chapters written by 37 contributors from diverse institutions. The preface indicates that it is intended for residents and practitioners who are preparing for an examination or wish to review a clinical case. These books are not intended to be the definitive texts on the various subjects. I have not read the other books in the series. *Adult Perioperative Anesthesia* is intended to cover those areas of anesthetic practice not addressed in the previous volumes. The first seven volumes discuss pediatric, cardiac and vascular, regional, ambulatory, and

obstetric and gynecologic anesthesia; critical care; and pain medicine. This volume consists of three sections: General Considerations, Anesthetic Management, and Special Considerations.

The most extensive (and helpful, in my opinion) chapter in part I, General Considerations, is "Preoperative Evaluation and Testing." At 80 pages, it is almost as large as the other eight chapters of part I combined. I found the section on cardiac evaluation to be particularly helpful. The other chapters in this section are too abbreviated or simplistic to be helpful to most practitioners—either trainees or veterans. As an example, the chapter on positioning is only five pages of text, with no mention of postoperative blindness.

Part II, Anesthetic Management, has 11 chapters on specific surgical areas such as thoracic, transplantation, and orthopedic surgery. In general, these chapters are brief and helpful reviews. However, not all are as advertised. The chapter "Anesthesia for Hepatobiliary Surgery" is really not about anesthesia for surgery on the liver—it is about anesthesia for patients with liver disease. There is no discussion of hepatic resection.

Part III is titled Special Considerations and has 10 chapters on diverse subjects that pose special problems such as obesity, malignant hyperthermia, and allergic reactions. An unusual chapter is "Guidelines and Practice Parameters." It is just what it says it is. It is almost entirely comprised of 22 boxes that reproduce documents that are readily available from American Society of Anesthesiologists, American Society of Regional Anesthesia and Pain Medicine, and two other organizations' Web sites. The chapter lists the Web site addresses. Some may find this compilation convenient, but I think the average computer-savvy anesthesiologist would easily find this information without help.

Throughout the book, there is unnecessary duplication of information, which dilutes its significance. Chapter 1 has six pages devoted to the preoperative evaluation of pulmonary patients, and chapter 10 has four pages on the same subject. An identical figure depicting spirometry appears in both chapters on both page 51 and page 229. The chapter on monitoring has two boxes containing standards for intraoperative monitoring and standards for postanesthesia care units. They are virtually identical to the standards in the previously mentioned chapter on guidelines.

The boxes and figures are informative but unfortunately are poorly placed, making the information difficult to find. For example, excellent summary information about antihypertensives is placed in the section on pulmonary evaluation in chapter 1. There is an excellent explanation of the process of pulse oximetry measurement in the chapter on monitoring. The last sentence in one of the paragraphs references box 4-6, but this box lists the advantages of pulse oximetry and has nothing to do with anything on that page. Further, there are examples of long-discarded approaches such as a domed pressure transducer in figure 4-1 and a description of inserting a central venous pressure catheter through a 14-gauge needle (neither have been used for decades). There are annoying errors such as the Frank-Starling mechanism being called a *principal* rather than a *principle*.

I would not purchase *Adult Perioperative Anesthesia* for my library. This book contains much valuable information, but this information is readily available elsewhere in a more concise and readable format.

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