

REVIEWS OF EDUCATIONAL MATERIAL

The new version has received a face-lift and is virtually unrecognizable from the outside. The drab gray circa 1970s cover is replaced with navy, red, and gold. It is sleeker, slimmer, and definitely looks great. But the important question was whether the third edition could measure up to its predecessor in content.

The new text follows the old outline closely as it is divided into two major sections that address physiology and pharmacology as it relates to the practice of anesthesia. There are still 58 chapters that are each subdivided into several smaller topics. In section I, the author takes readers through an extensive review of pharmacology, covering 37 major classes of pharmacological agents, and provides a chapter that reviews pharmacokinetics, pharmacodynamics, and stereochemistry. This is followed in section II by a brief discussion of physiology, including 20 chapters that review every major organ system and cover several important and related topics (*i.e.*, pain, nutrition, and fluid management). New information about the latest drugs and some recent advances in physiology are included. Each chapter is enhanced by extensive updates to the tables, figures, and contents. The new version is easy to read, with many great figures and tables that should improve the reader's comprehension. The book makes an excellent review text for residents and nurse anesthesia students. In addition, it is an outstanding reference for all anesthesia care providers.

Section I covers the area of pharmacology and has undergone the most extensive changes from the second edition. It includes many new additions. The chapter on pharmacokinetics and pharmacodynamics provides a good discussion of stereochemistry and potential drug-receptor interactions. The author has updated the information on potential mechanisms of action for both intravenous and inhalational agents. I especially liked the addition of several new figures in this section, which improved my overall understanding of the material. The chapters on specific drug classes contain the latest information, and the figures have been revised for easier access to information. I was pleased to find very current information on important items such as sevoflurane, remifentanyl, ropivacaine, and opioid receptors. It is to the author's credit that recent topics such as low molecular weight heparin and transient radicular irritation were also addressed. I found the chapters on local anesthetics, opioids, neuromuscular-blocking drugs, and receptors to be well written and arranged. The Drug Index makes material very easy to access. The pharmacology section is this book's best aspect and is a wonderful reference for the busy practitioner.

Section II of the text covers all of physiology in less than 200 pages. It is concise and, of course, incomplete. If an in-depth discussion of cutting-edge research in physiology is needed, it is best to look elsewhere. The author has updated and expanded some topics but has definitely retained the original plan of keeping it light. I was a little disappointed in the pain chapter, which contains very little new information. However, I must admit that the best chapters are the ones that are probably most popular with readers. For instance, the chapters on central nervous system, cardiac, and lung physiology are excellent. The addition of several figures to these sections again should improve reader comprehension. Overall, if a quick review of physiology (with a few missing details) is sufficient, this text cannot be beat.

Pharmacology & Physiology in Anesthesia Practice is a well-written text and fits the bill if a no-frills review and reference is needed. The amount of material covered in this slim volume is generous. At \$95.00 it is expensive, but it has a lot to offer. The third edition has been updated with the latest drug information, many new figures, and significant improvements in content. It does an outstanding job in the section on pharmacology, but it remains weak in addressing physi-

ology. This classic is definitely new and improved, and it also looks great on the bookshelf.

John A. Thomas, M.D.
Assistant Professor
Department of Anesthesiology
Wake Forest University School of Medicine
Medical Center Boulevard
Winston-Salem, North Carolina 27157-1009
jthomas@wfubmc.edu

(Accepted for publication April 29, 1999.)

Recent Advances in Anaesthesia & Analgesia, Number 20.
Edited by A. P. Adams and J. N. Cashman. Edinburgh, Churchill Livingstone, 1998. Pages: 264. Price: \$75.00.

Ask counsel of both times: of the ancient time, what is best; and of the latter time, what is fittest.¹

Francis Bacon

In recognizing that "medical knowledge is constantly changing," the contributors, primarily from the United Kingdom, to the 20th book in the *Recent Advances in Anaesthesia & Analgesia* series seek to illuminate the latest progress in the field. Reflective of the diverse nature of anesthesia, the book presents 13 chapters, each written by a different author, ranging from basic molecular investigations into the mechanisms of general anesthesia and neuromuscular transmission to advanced clinical interventions with nitric oxide, inotropic support, and noninvasive cardiac output monitoring. To provide cohesion, each chapter concludes with key points, which are used responsibly; on rare occasion, however, a concept not previously explained appears.

There are successes within this book. To the credit of the authors and editors, the writing is clear and readable, has global relevance, and summarizes the literature succinctly and coherently. The chapters on nitric oxide in acute respiratory distress syndrome and recent discoveries in neuromuscular transmission translate complex physiologic mechanisms with remarkable clarity. The chapter on the economics of anesthesia introduces basic concepts on cost analysis without distilling our worth to simple formulaic measures. Furthermore, the authors show great care in evaluating and not overextrapolating the literature and monitoring data. The chapters on fetal sentience (the capacity to experience pain) and learning, memory, and awareness under general anesthesia show remarkable insight into the weaknesses and potential biases in existing studies. The chapter on the "golden hour," alluding to the critical time after traumatic injury, laments the heavy use of retrospective analyses and reviews, replete with their inadequate controls, in establishing guidelines. Finally, in keeping with the title, the references are timely, with most from the mid-1990s.

A few limitations, perhaps imposed by the "update" focus of this book, appear in the form of inadequate depth of coverage. The chapter on inotropic support in the critically ill patient mentions phosphodiesterase III inhibitors collectively but neglects the various clinical trials that have observed differences in inotropism, vasodilation, and side-effect profiles. The chapter on noninvasive monitoring of cardiac output craftily introduces several formulas used in analysis; however, a few would benefit from an expanded description. Furthermore, perhaps in an attempt to be succinct, the book does not provide relevant references and misses opportunities to guide interested readers to

REVIEWS OF EDUCATIONAL MATERIAL

other sources of information. The chapter on ventricular fibrillation and transthoracic defibrillation alludes to several statistics and therapeutic strategies, but the sources, dates, and study methods are not referenced. The chapter on the anesthetic management of patients with brain injury who are having non-neurologic procedures provides only limited support for statements such as "there may be theoretic reasons for preferring an IV technique in these patients" and "the routine use [of prophylactic hyperventilation] is not recommended for head-injured patients."

Several imperfections exist. One particular statement neglects the health and vigor of our specialty and the service of its practitioners. The chapter on the economics of anesthesia introduces the topic by stating, "Anesthesia is unusual within the spectrum of healthcare in that it has little if any therapeutic benefit in its own right, and is only of value in that it permits treatment, usually of a surgical nature." This statement rejects the *modus operandi* of the obstetric anesthesiologist and pain management specialist, which suggests that pain relief alone is a noble, worthy goal and dismisses the advances in critical care and perioperative medicine, which include the novel technique of drug withdrawal under anesthesia. In addition, a few chapters, such as the one on fetal sentience, gives little for the practicing consultant anesthesiologist to grasp: What does this information mean in terms of specific medications that should be given or avoided? The chapter on pain management in the intensive care unit does not triage modalities in terms of effectiveness or particular advantages. In contrast, the chapters on stabilization and transportation of children requiring ad-

mission to a pediatric intensive care unit and learning, memory, and awareness during anesthesia provide wonderful, clinically relevant examples.

Recent Advances in Anaesthesia & Analgesia provides a friendly, current review for the resident in training, the generalist, and the subspecialist consultant anesthesiologist who need a taste of the complex body of anesthesia. Although the price of the book may be a bit taxing and encouraged me to think of other, more necessary texts, I, a Bostonian, found it to be a satisfying cup of tea.

Lawrence C. Tsen, M.D.

Department of Anesthesiology, Perioperative and Pain
Medicine
Brigham & Women's Hospital
Instructor in Anaesthesia, Harvard Medical School
Boston, Massachusetts
lctsen@bics.bwh.harvard.edu

Reference

1. Bacon F: Of great place, The Essays or Counsels, Civil and Moral, of Francis Bacon, 1905, p 48. As quoted in Respectfully Quoted, Washington, DC, Library of Congress, 1989, p. 374

(Accepted for publication April 29, 1999.)