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Essential Anesthesia: From Science to Practice. By Tammy Y. Euliano, M.D., and Joachim S. Gravenstein, M.D., Cambridge, United Kingdom, Cambridge University Press, 2005. Pages: 250. Price: \$39.99.

As many medical students rotating through anesthesiology have discovered, the practice of anesthesia involves more than the placement of endotracheal tubes and intravascular catheters. Although we have many excellent and comprehensive texts in our field, attempting to read these texts during a relatively short rotation is not only impractical, but may also prove overwhelming for the student. In this regard, recommending a book that provides an adequate exposure to the field and can be read in a relatively short period of time has been a daunting task for those of us in academic anesthesiology—that is, up until now. *Essential Anesthesia* by Euliano and Gravenstein is targeted to medical students, but as the authors have stated, the text may also prove beneficial to healthcare providers in other specialties seeking a brief overview of the practice of anesthesiology.

The novice anesthetist will find the layout of the text quite refreshing. By addressing very practical information early and leaving detail-oriented information to later sections, the authors have successfully grabbed the attention of the reader in the first few pages. The first chapter of the book presents a “brief” history of the field of anesthesiology. Although the history is significant and interesting to many of us, medical students looking for an introductory rotation may not be as enthused. In this regard, I give the authors credit for keeping this chapter succinct and referring the reader to other texts.

The next two chapters introduce the reader to airway management, vascular access, and fluid management. Interestingly, students are frequently involved with these skills as their first exposure to anesthesiology. Presenting these early in the book, therefore, is very intuitive. The chapter on vascular access is an excellent example of the practical nature of the text. In this chapter, among other concepts, the step-by-step process of placing an intravenous catheter is detailed. This is the sort of information you often cannot find in textbooks and is learned firsthand. Students and other providers learning to place intravenous catheters will find this useful.

Options for regional and general anesthesia are discussed in the next chapters. Again, these are oversimplified, but are excellent as a general overview. Finally, a chapter dedicated to postoperative care and common problems in the postoperative period is presented, followed by a chapter on monitoring. The latter chapter should be read by all anesthesia providers, because it is an excellent reminder of some of the more simple monitors we have (e.g., stethoscope, fingers). Although monitoring in anesthesia has come a long way during the past several decades, some of the best monitors are still the simple, commonsense ones.

The next section of the book is dedicated to applied physiology and pharmacology. The cardiovascular and pulmonary systems have dedicated chapters, whereas the other organ systems are merged into a single chapter. Hopefully this will not offend our colleagues in other subspecialties! The chapter on pharmacology provides the appropriate amount of information that a student should acquire during an anesthesiology rotation. The final section of the book is devoted to several sample cases that are simple enough for most students to understand but introduce topics that will likely lead to further discussion.

Based on the presentation of the material in this book, it is obvious that Euliano and Gravenstein have significant experience teaching. The material is presented in an orderly and concise manner, which will benefit students and other learners alike. Although it would be unwise to rely on this text to pass anesthesiology board examinations (and that was not the intent), this book should be on the reading list of anyone rotating through an anesthesia department or those interested in a brief

overview. Hopefully this text will peak the interest of more medical students and help to recruit high-quality people into anesthesiology.

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Pharmacology for Anaesthesiologists. By J. P. Howard Fee, M.D., Ph.D., F.C.A.R.C.S.I., and James G. Bovill, M.D., Ph.D., F.C.A.R.C.S.I. London and New York, Taylor and Francis, 2005. Pages: 309. Price: \$120.00.

The stated purpose of this book is to provide up-to-date information about new developments in pharmacology to trainees in anesthesiology, established anesthesiologists, and those in other related specialties. Overall, the book succeeds admirably in accomplishing this goal. Although the material is comprehensive and clinically relevant, it is not overly detailed, nor is it intended to be exhaustive. References are provided at the end of each chapter for further reading. A clinician can read the material of interest to gain an overview and understanding of key concepts. The core material for an anesthesiologist, such as drug action, pharmacokinetics, pharmacodynamics, and individual classes of drugs, is described succinctly and clearly in straightforward language.

The chapter on drug action highlights current information on the structure and function of the major types of transmembrane receptors: voltage and ligand-gated ion channels, seven transmembrane G protein-coupled receptors, and receptors with intrinsic enzymatic activity (protein kinases and guanyl cyclases). Because of the rapid advances in knowledge in this field, the update will be especially useful for established practitioners. There are excellent chapters on the major classes of drugs used by anesthesiologists: inhalation, intravenous, and local anesthetics; neuromuscular blocking and reversal agents; opioids and nonsteroidal antiinflammatory drugs; cardiovascular, respiratory, and CNS drugs; diuretics; and antiemetics. In a readable and fluent style, the chapters review the salient features of the mechanism of action and physiology of the core drug classes and build on this background information when describing the clinically relevant features of the individual drugs.

The chapter on drugs acting on the endocrine system was the weakest chapter, especially the section on diabetes. Because diabetes is the most frequently encountered endocrine disease in patients who frequently have advanced multisystem disease, it would have been useful to discuss in further detail the etiology and physiologic consequences of the disease relevant to anesthesiology. Considering the several new preparations of insulin that are available, a discussion of these would have been welcome, as would a table of the time of onset and duration of action of the different insulins and oral hypoglycemics in current use.

A major strength of the book is the chapters dealing with topics not usually covered in anesthesia texts. The material they discuss will assist anesthesiologists in fulfilling their role as physicians and consultants of anesthesia for the increasingly seriously ill patients undergoing surgery. As with the core subjects, the sections in the individual chapters on the mechanism of action and relevance to anesthesia are well done and provide the platform for understanding and intelligently administering the drugs in current use and those that will undoubtedly be introduced in the future. The chapter on therapy for infection sketched useful information on numerous classes of drugs. One weakness was the overly short discussion of azoles in view of their role in inhibition of steroid biosynthesis and of the major drug metabolizing enzyme in human liver, cytochrome P-450 3A. Anesthesiologists will find that the chapters on histamine and its antagonists and antineoplastic and immunosuppressive drugs contain an informative brief

review of the physiology and mechanism of action these drugs. The chapter on drugs acting on the hemostatic system (*e.g.*, heparin and protamine) is required reading for all practicing anesthesiologists. It provides easy-to-understand, practical information, not merely an academic scholarly dissertation. The adverse drug reactions chapter was somewhat dated, tabulating drug interactions for drugs no longer in clinical use while neglecting newer mechanisms of drug interactions such as drug transporters. Pregnancy, lactation, neonatal physiology, and mechanism of action of drugs in these conditions were discussed from an enlightened perspective in the brief chapter on drugs in special circumstances. Novices and experienced clinicians alike will find the chapter on statistics and clinical trials essential reading. The authors should be commended for having the foresight to include such a chapter in this textbook. An alternative title for this chapter might be

“Statistics and Clinical Trials for Dummies” because the complex subject is so lucidly explained and illustrated with excellent examples. The frequently used statistical terms are defined in straightforward language. This chapter is recommended reading for clinicians who are increasingly called on to apply the results of complex clinical trials to their anesthesia practice.

In summary, this is a book worth owning because of its easy-to-understand presentation of abundant, complex new medical information. This book would be even more valuable if the authors could provide a more current list of references for further reading in the next edition.

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