REVIEWS OF EDUCATIONAL MATERIAL

James C. Eisenach, M.D., Editor

The Pharmacologic Basis of Anesthesiology. Edited by T. Andrew Bowdle, Akira Horita, and Evan D. Kharash. New York, Churchill Livingstone, 1994. Pages: 779. Price: $99.00.

Much of anesthesiology is applied pharmacology, and with no other basic science field is our specialty more closely associated. Still, there is a lack of good texts merging the two fields. As indicated in the preface, *The Pharmacologic Basis of Anesthesiology* was written because the authors believed no reference book available answered, in adequate depth, questions about the basic science, pharmacokinetics, and clinical pharmacology of anesthetic drugs. They decided to fill that gap and created an excellent text that focuses specifically on the pharmacology of the unique set of drugs that defines the specialty of anesthesiology.

The organization of this book is unconventional, yet effective. Apart from an introductory chapter on cellular neuropharmacology (which would have benefitted from more, and higher quality, figures), it contains no general pharmacology chapters. Instead, basic science is integrated with each of the sections on specific classes of drugs. Each section consists of a chapter on basic pharmacology of the drug class, one on pharmacokinetics, and one or more on clinical pharmacology and applications. This approach gives a direct clinical relevance to even the basic pharmacology sections and unites basic and practical aspects in a manner that a division of the book in "general" and "applied" sections never could. The method has some disadvantages, primarily the difficulty in finding basic pharmacology principles among the various chapters. For example, the basics of pharmacokinetics are covered in the chapter on opioids, the basic concepts of electrophysiology in the chapter on local anesthetics, and the basic concepts of receptor molecular biology in the chapter on adrenergic agents. However, this is a minor detriment.

Coverage is thorough, yet the book reads easily and maintains a clinical perspective throughout. Sections are devoted to opioids (including excellent chapters on the agonists-antagonists and on spinal opioid use); local anesthetics; intravenous induction agents, with the exception of ketamine, which (reasonably) has its own section; neuromuscular blockers and antagonists; and inhalational anesthetics. Two final sections cover anesthetic adjuvants and emerging concepts, each with an eclectic choice of topics. The section on anesthetic adjuvants includes chapters on adrenergic receptors, α_2 agonists, β antagonists, nonsteroidal antiinflammatory drugs, and antiemetics. Interestingly, there is no coverage of adrenergic agonists such as ephedrine and phenylephrine, which are commonly used by anesthesiologists. The section on emerging concepts discusses novel drug-delivery techniques, nitric oxide, and new developments in pharmacokinetics. A chapter on novel spinal drugs (α_2 adrenergics, muscarinic agonists, tricyclic antidepressants) would have been useful in this section. Overall, the text provides comprehensive coverage of most drugs in common use by anesthesia providers. The main subject lacking is basic and clinical pharmacology of chronic pain management.

As is, to some degree, unavoidable in a multiauthor text, there are overlaps and style differences, neither of which is a significant deficiency. However, a few clinically important issues, which should have been discussed, have fallen through the cracks. Some examples are the pharmacology and use of EMLA, the use of rectal methohexital in children (or intravenous methohexital for electroconvulsive therapy), as well as the effects of lidocaine on cerebral hemodynamics and its use in preventing blood pressure and intracranial pressure increases.

In general, this volume is an excellent resource, as a textbook and as a reference. The figures are clear and adequate in number, the index is complete, literature references are pertinent and current, and sufficient effort has been made to include pointers to new developments to make the book useful for a number of years in this rapidly changing field. It is recommended reading for all anesthesiologists who want to update or deepen their understanding of the drugs they use daily.

Marcel E. Durieux, M.D.
Assistant Professor of Anesthesiology and Neurosurgery
Box 238
University of Virginia Health Sciences Center
Charlottesville, Virginia 22908

A Philosophical Approach to Anaesthesia. By J. Schou. Lorrach, Alix Publishing Group, 1994. Pages: 104. Price: $18.00.

Idle moments are rare at an international medical meeting, especially one in Paris, France. The combination of a resolving coryza and a really nasty, rainy, cold spring day forced me to spend an extra hour or so in the scientific and technical exhibits rather than strolling the Tuileries gardens or the Champs Elysees. In the exhibit hall I found John Schou, a bearded giant of a man selling his own books. The challenge on the back cover was too much temptation for me, and I bought a copy to read on the return flight. He asks, "You call yourself an anaesthetist—do you really know what anaesthesia is?" If my answer is yes; he responds, "You know too much, read *A Philosophical Approach to Anaesthesia* and you will see how little you knew." If my answer is no and I don't care, he responds, "A difficult though widespread problem of how anaesthetists lost touch with anaesthesia." If I answer no but I am interested, he responds, "Finally a book for those who do not seek simple answers to complex questions. This book is for the stimulation of thought (but not attempting universal agreement) while opening up neglected topics of the anaesthetist's profession."

The book contains nine chapters and an epilogue in its 104 pages. It challenges our language and our science. Schou develops his iconoclastic philosophies in detail by showing that anaesthesia is not sleep (physiologic sleep); unconsciousness is not sleep. Anaesthesia has some similarities with sleep but shows important differences from natural sleep. He attempts to show that investigators (double-blind anesthetists) who believe only in therapies that have been proven in controlled clinical studies rarely will produce innovative progressive developments. Such individuals are able to follow the conventional track, blinded on one side by standards and guidelines and on the other side by the need to satisfy mathematical statistics ($2 + 2 = 3.67 \pm 0.38$, $P < 0.05$). The standard guidelines are of great comfort to the beginner in any medical specialty. Later, when the background has become clear and experience has been gathered, the standards inhibit the improvement of a practice that, in the

meantime, has become too simplistic. Our patients, as much as they appear the same, vary in infinitely complex ways, and most standardized guidelines suffer from the lack of standardized patients. Schou develops this theme in greater detail with a fictional tale that places W. T. G. Morton and his discovery of anesthesia into the modern world. (What a way to celebrate the sesquicentennial of anesthesia!) Morton submits his manuscript to a journal. The editor rejects it but states that he will reconsider if the manuscript is extensively revised according to the recommendations of the reviewers. The revision is accepted for publication in an upcoming issue (1–2 yr later). Anticipating the delay, Morton submits an abstract to a scientific congress that has modified its program to present mostly refresher course lectures. His lecture is attended by six fellow lecturers, the two honorary chairpersons, and three others. Morton has established little, except to support his claim to be first. The intriguing paradox in the tale is that, in the era of high-speed telecommunications, news of an important discovery may take longer to reach the public that it did 150 yr ago when, from October 1846 to March 1847, the news had spread around the world and clinical "firsts" were reported from remote countries.

Schou describes the conceptual change from total cerebral depression produced by a single agent to the use of a variety of agents to achieve "balanced anaesthesia" and the pitfalls of the new concept. He then speculates on future theories of the mechanisms of anesthetic action on cerebral function and pronounces that we cannot come to grips with mechanisms because we have not properly disciplined our vocabulary. For example, the distinction between sedation and hypnosis is still hotly debated in the halls of organized anesthesiology. Schou offers a new definition of anesthesia that I do not find agreeable, thereby contributing to the problem rather than the solution. He invents a new word "dysthanasia," which means doing every high-priced procedure or test possible on a hopelessly ill, dying person in the intensive care unit.

Schou admits in the epilogue that his book "will be read by few and appreciated by yet fewer." He may be right, but I think that we must be constantly reminded that we do not know as much as we think we know and that much of what we know is wrong. I recommend the book for anyone who is willing to have his knowledge and actions challenged in a way that may open the door to a wider vision of our specialty of medicine.

A. H. Giesecke, M.D.
Jenkins Professor of Anesthesiology
Department of Anesthesiology and Pain Management
The University of Texas Southwestern
Medical Center at Dallas
5323 Harry Hines Boulevard
Dallas, Texas 75235-9068

Principles of Airway Management. By Brendan T. Finucane and Albert H. Santora. St. Louis, Mosby-Year Book, Inc., 1996. Pages: 343 Price: $32.00.

I like to read. I liked the book. Finucane and Santora have produced a solid, clear, and concise dual-authored second edition of their 1988 book, *Principles of Airway Management*. The book stimulated hours of reading, obtaining references, and the purchase of another heavy and expensive 1,000-page textbook on airway management. This 6 × 9-inch pocket-sized book covers a great deal of information in the 12 chapters presented.

Chapters 1 and 2 are a good review of basic anatomy, basic airway management, and cardiopulmonary resuscitation. It is important material but, as always, dry. The presentation of anatomy would have been enhanced with more examples of correlative anatomy and better references. Most will not be patient enough to read through it.

Chapter 3 covers equipment for airway management. The numerous photographs are simple and not aimed for the practicing anesthesiologist, but for individuals being exposed to this equipment for the first time. The 41 references saved the chapter for me.

Chapter 4 is where the text begins to shine. Fiberoptic intubation is presented in a clear and logical sequence. I enjoyed their use of summary boxes to highlight important concepts and information. I thought the photographs were more suited to the anesthesia technician than the anesthesiologist.

Chapter 5, "Evaluating the Airway," is great. It puts much information in 20 pages. Good diagrams, photographs, and useful advice make this very clinically relevant. Reading this chapter a couple of times will give new insight and motivation to change our practice and stimulate us to document and perform more thorough preoperative examinations and communicate and document our findings on the anesthesia record or chart.

Chapters 6–9 cover preparation, techniques, and complications of intubation in four solid chapters that are well referenced. I enjoyed the handling of the American Society of Anesthesiologists algorithm for difficult intubation. The subchapter on difficult intubation in the emergency room setting tackles the problem of the patient with cervical spine injury. Challenging this topic and making it so worthwhile in 1.5 pages was an accomplishment. Their take home message is, "The most important consideration is that the anesthesiologist secure the airway using the most familiar technique." The references will help lead you to that conclusion. I have one bone to pick; The label of figure 8–21 should be changed from EGTA to PtL® airway.

Chapter 10 presents a well cautioned, excellent review of surgical approaches to airway management. Retrograde intubation, cricothyroidotomy, and tracheotomy are covered. The diagrams and photographs are excellent, the advice is good, and they describe the commercially available kits. In the "cannot intubate, cannot ventilate" scenario, this chapter could be life-saving.

Chapter 11 covers the pediatric airway. Included are basic cardiopulmonary resuscitation in infants and children and a well written section on neonatal resuscitation. The algorithms and summary boxes are useful. Croup and epiglottitis are reviewed. The book ends with a short chapter (12) on the basics of mechanical ventilation.

If you like a well written portable manual, you'll like this book. I will continue to use it to teach medical students (the first edition's intention), anesthesia technicians, and prehospital students. Any physician requiring expertise in airway management will find it useful. I congratulate the authors on a job well done. I would like to thank the Wood-Library Museum for the loan of the first edition of this text; they continue to be an excellent resource to our society.

Jonathan C. Berman, M.D.
Director of Obstetric Anesthesia
St. Anthony's Hospital Central
4231 West 16th Avenue
Denver, Colorado 80204