

cepts and progress to the clinical applications from which they are derived. For example, the chapter concerning fluid flow begins with a discussion of the characteristics of laminar and turbulent flow. It proceeds to explain the Bernoulli equation and the Venturi principle, which is the basis for the constant inspired fraction ( $FI_{O_2}$ ) delivery oxygen mask. The chapter concerning work, power, and energy begins with the fundamentals and then uses these concepts in the clinical setting by discussing how the work of breathing changes with spontaneous and controlled ventilation, laminar and turbulent flow, decreases in lung compliance, and increases in lung resistance.

The book is paperback-bound, and the pages are small ( $23 \times 15$  cm). The 25 chapters, averaging 10–15 pages in length, are written clearly and concisely. The book, on the whole, is comprehensive and yet is easy to read because the pages are abundantly illustrated with diagrams that complement the text. The previous edition was published 5 yr ago. In the past 5 yr, many new monitoring techniques, such as pulse oximetry, capnography, and mass spectrometry have become standard practice. These are discussed in detail.

The authors did not intend this book to be a reference work in the field and have avoided the use of advanced mathematics to derive formulas. Some of the units of measurement may be confusing to residents of the United States because this book uses the *Système International d'Unites* (SI) system. For example, the unit of pressure used throughout the text is the kiloPascal, which equals 7.5 mmHg or 10.2 cmH<sub>2</sub>O. Definitions of all units, however, are contained in the appendix.

In summary, this book is well written and avoids the tedium that is common to many other texts on this subject. It explains in a simple, understandable way the physical principles underlying many concepts central to common anesthesia practice. This book will be useful not only to students and residents studying for the anesthesiology boards, but also to practicing anesthesiologists seeking to understand the inner workings of the electronic monitors that we have come to rely on every day in the operating room.

ELON H. MEHR, M.D.

*Fellow, Department of Anesthesiology and Critical Care Medicine  
Johns Hopkins Hospital  
600 North Wolfe Street  
Baltimore, Maryland 21205*

**Smith's Anesthesia for Infants and Children.** Fifth Edition. EDITED BY ETSURO K. MOTOYAMA AND PETER J. DAVIS. St. Louis, C. V. Mosby Company, 1990. Pages: 950. Price: \$99.00.

Noted for its clarity of prose, consistency of style, and exceptional bibliography, *Smith's Anesthesia for Infants and Children* was at one time the textbook of pediatric anesthesia. Unfortunately, during the 1980s it became hopelessly out of date and was supplanted by more up-to-date works. Fortunately, the publishers, Mosby-Year Book, de-

cidated not to retire the title but to reinvigorate it, and chose Dr. Etsuro Motoyama and Dr. Peter Davis of the Children's Hospital of Pittsburgh to edit a new edition. And did they! This new edition is outstanding and reclaims the rank of being the best textbook in the field. Indeed, it is this reviewer's belief that it belongs on the shelf of every anesthesiologist who provides anesthesia to children.

The earlier editions of Smith's essentially were written by Dr. Robert Smith himself, one of the pioneers of the subspecialty. Because this textbook is now multiauthored, the editors are to be congratulated for insisting on a uniformity of style and approach that retains the flavor of the original. Divided into four sections, this textbook follows the format of most traditional textbooks. The first section deals with physiology and pharmacology, the second with the basics of general and regional anesthesia, and the third with the clinical management of patients grouped by specific surgical subspecialties, such as neuro- or cardiac surgery; the fourth is a potpourri covering such aspects of care as pediatric intensive care, outcome and safety, medicolegal issues, etc.

It is difficult to identify specific chapters for special mention, because the book is so uniformly excellent. Choosing specific chapters implies that these chapters are better or worse than others. This is simply not the case. Each chapter of this completely new textbook stands on its own, and many could easily be expanded into separate monographs. Indeed, as presently written, many chapters, alone or in combination, are as good or better than many monographs now in the market. Moreover, as might be expected from a textbook emanating from one of the premier transplant centers in the world, the chapter on anesthesia for organ transplantation is a veritable primer on the subject, and one that I refer to constantly in my own practice. If I had any wish list for the next edition it would be for a separate chapter on the management of pain in children.

Finally, I must admit I have never read a textbook from cover to cover except when I was studying for the written Board examination in anesthesia. I have always used textbooks to look up specific topics when the need emerged. Because of this I have always disliked two (or more)-volume texts. I invariably pick up the wrong volume to find the topic for which I was searching. One of the reasons I like this book so much is that it is a one-volume text. The other reasons are that it is extremely well written, well referenced, and well indexed. In summary, this "bible" truly belongs on the book shelf of every anesthesiologist who provides anesthesia to children and should be required reading for residents and fellows.

MYRON YASTER, M.D.

*Associate Professor  
Anesthesiology/Critical Care Medicine and Pediatrics  
The Johns Hopkins University  
600 North Wolfe Street  
Baltimore, Maryland 21205*