

REVIEWS OF EDUCATIONAL MATERIAL

James C. Eisenach, M.D., Editor

Atlas of Cardiovascular Monitoring. By Jonathan B. Mark. New York, Churchill Livingstone, 1998. Pages: 362. Price: \$79.00.

Accurate integration and interpretation of cardiovascular monitoring data are paramount to proper care of patients. However, this standard is not always met, as is evidenced by numerous studies during the past decade or so that question the safety and effectiveness of invasive hemodynamic monitoring. Whether this deficiency is caused by the monitor itself, improper usage, or inadequate education is open for debate, but the *Atlas of Cardiovascular Monitoring* by Jonathan Mark goes a long way toward combating the problem of inadequate education.

The *Atlas of Cardiovascular Monitoring* consists of 20 relatively concise chapters, each followed by extensive examples of various tracings, waveforms, and diagrams that discuss invasive and noninvasive cardiovascular monitoring. The text is well-written, accurate, and thorough without being oppressive, which allows for quick review when needed. The strength of this book, however, is in the diagrams. The diagrams are clear and well-captioned enough to stand on their own, and complement the text. They extensively show normal physiologic, diseased, and artifactual states that are frequently (and infrequently) seen during the care of patients in both the operating room and the intensive care unit. The diagrams emphasize, as is stressed and repeated throughout the entire book, the more accurate picture seen when various monitoring methods are integrated together.

The first two chapters discuss general definitions of monitoring and waveform interpretation and its relation to the cardiac cycle. Chapters 3–6 discuss the basic waveforms found when floating a pulmonary artery catheter, identification and interpretation of the wedge pressure, artifacts encountered and how to recognize them, and the prediction of left ventricular end-diastolic pressure in both normal and diseased states. The next three chapters discuss invasive and noninvasive arterial blood pressure measurement and interpretation and thoroughly explain the technical aspects of monitoring systems, damping coefficients, and the like. The next two chapters discuss basic electrocardiology (lead placement, systems, and selection) and electrocardiographic detection of myocardial ischemia, including limitations and artifacts. The next three chapters (12–14) integrate information discussed previously to combine electrocardiographic and hemodynamic data for more accurate detection of myocardial ischemia, heart rate, and heart rhythm. The final six chapters focus on pressure–volume relations, interactions between the respiratory and circulatory systems, and various pathophysiologic states, including valvular heart disease, pericardial disease, changes during cardiopulmonary bypass, and proper interpretation of intraaortic balloon counterpulsation data.

The *Atlas of Cardiovascular Monitoring* is one of those books that should be on all bookshelves. It is applicable to all levels of training and is appropriate for anesthesiologists, intensivists, cardiologists, and surgeons who rely on cardiovascular monitoring for diagnosis and guidance of therapy. At \$79.00, it is reasonably priced (especially considering the information contained within), and it is of reasonable size to fit in my briefcase along with my laptop and go from the office to the operating room to the intensive care unit and home, without wearing me down.

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Operating Room Management. By Ronald A. Gabel, John C. Kulli, B. Steven Lee, Deborah G. Spratt, Denham S. Ward. Boston, Butterworth Heinmann, 1999. Pages: 224. Price: \$65.00.

The authors have written an outstanding introductory textbook in operating room (OR) management. I wholeheartedly recommend it to hospital administrators with responsibility for the OR suite, OR material management specialists, nurses, anesthesiologists, and surgeons who want an introduction to management concepts. The authors' figures are clear. The text is lucid. The examples are good. The index is complete. The book is so well-edited and the chapters are written in such a complementary fashion that there were virtually no statements about which I disagreed.

This textbook is analogous to 200-page books for medical students and resident rotators from other specialties in anesthesiology. After reading such a textbook in 10 h or so, the reader has a good feel for the issues in the specialty. For example, for hospital administrators, the book explains "that true life-or-death emergencies are often related to uncontrolled bleeding or nearly complete airway obstruction." For physicians and nurses, the book defines terms such as "incremental cost" and "debt service coverage ratio." The book contains no references. At the end of each chapter, there are some recommended readings, but no scientific articles from the medical or management sciences literature.

This book is very easy to read because it describes principles, not details. For example, the chapter about material management explains the importance of maintaining a low inventory to decrease costs while not "allowing the absence of critical items at the time of surgery." Words are used—there is no calculus (economic order quantity theory) or probability theory (safety stock concepts). Consequently, the book does not tell the OR manager how to achieve goals, only what goals to achieve. As another example, the book explains that "the OR information system should be used to schedule all persons who work in the OR suite. . . schedules . . . should reflect historical utilization patterns of the OR suite." Again, in that linear programming algorithms are not discussed, the OR manager is told what to do but not how to do it. As long as the reader does not naively begin to think that by combining practical experience with having read this book they actually know how to manage the OR, he or she is set.

In summary, this book is absolutely terrific as an introductory textbook. If you are an anesthesiologist or nurse anesthetist who cares about OR suite finances but does not need the mathematical equations to actually make management or staffing decisions, I am confident that you will find purchasing this book to have been a first-rate decision. I congratulate the authors for having written such a superb textbook.

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Atlas of Anesthesia, Volume VI: Pain Management (CD-ROM). Edited by Ronald D. Miller (series) and Stephen E. Abram, M.D. (volume). New York, Churchill Livingstone, 1999. Price: \$195.00.

Books on CD-ROM are becoming more popular, but it is uncertain as to their usefulness for the average physician. Just like books that are purchased solely to be reference sources in anesthesiology libraries, CD-ROM books may find their way to the back of the compact disk stack. Everyone in medicine knows how to find a topic in a book: one manually flips through the table of contents and the index to locate the information. However, with a CD-ROM, another layer of knowledge, effort, and equipment is added. One needs a computer and must know how to load and retrieve the program. Once at the title page, navigation through the virtual pages involves more than licking a finger to turn a page.

With these differences in mind, I evaluated the pain management volume (VI) of the *Atlas of Anesthesia* series with respect to content and the ease by which one can access the information.

First, be sure that you have the minimum system requirements. In reviewing these parameters, anyone with a computer, IBM-compatible or Macintosh, should be able to use this disk. The instructions are easy to follow, and the program installs under "Programs," listed as "Cm" for Current Medicine. Clicking on the "Volume 6" bar produces the table of contents, which comprises 15 chapters. The chapter titles include (1) "Peripheral Mechanisms of Pain Perception"; (2) "Mechanisms of Pain Processing"; (3) "Mechanisms and Management of Neuropathic Pain"; (4) "Acute Postoperative and Posttraumatic Pain Management"; (5) "Back Pain"; (6) "Sympathetically Maintained Pain"; (7) "Visceral Pain"; (8) "Clinical Diagnosis and Treatment of Headache"; (9) "Cancer Pain Management"; (10) "Spinal Cord Stimulation"; (11) "Psychological Assessment and Therapy in Pain Management"; (12) "Organization of Pain Management in the Clinical and Workplace Settings"; (13) "Physical Rehabilitation in Chronic Pain Syndrome"; (14) "Outcomes Assessment in Pain Management"; and (15) "Acute Herpes Zoster and Postherpetic Neuralgia."

From the table of contents, one can access the subheadings in each chapter and go directly to that page. As an example, "Chapter 5—Back Pain" has a subheading titled "Sacroiliac Pain." Clicking on that line produces the text about this topic. Most of the contents are arranged in such a way that a picture or graph appears, followed by explanatory text. These figures are too small to view without enlarging them. An additional feature allows one to split the screen into halves or thirds so as to follow the text while viewing the visual aid. "Pop-ups" are

highlighted words or reference numbers that reveal an explanation or citation when clicked. This feature is useful if one wishes to immediately write down the reference citation for further reading.

As with all software programs, there are various toolbar options that allow for bookmarking certain areas, writing notes in the "columns," searching the entire text for key words, and printing certain aspects of the written text.

Chapters 1-3 are particularly well-written by established investigators who are involved with pain mechanism research. Chapters 4-10 involve clinical topics that provide more than a survey treatment but less than a textbook review of each condition. The pictures enhance the understanding of the text explanation, which is written in "Hemingway" style, *i.e.*, with an economy of words. Chapters 11-13 provide concise and informative overviews of the psychologic components of pain management, the administrative organization of pain clinics, and rehabilitation of patients with chronic pain, respectively. In Chapter 14, outcomes assessment is a chapter that defines terms and outlines how one begins evaluating treatment outcomes clinically. The chapter title is unintentionally misleading, in that it does not provide evidence in support of using one pain treatment approach *versus* another. The last chapter, which deals with herpes infection and pain, is particularly strong in the explanation of its pathogenesis but correspondingly weak in describing a multidisciplinary approach to therapy. For this condition, various treatments have been tried with varying degrees of success. A mere mention in table form of these treatments would help the reader to seek esoteric approaches for specifically difficult cases.

I had a few problems with the navigating, which I considered minor. I could not get the scrolling wheel on the mouse to advance the text. Instead, I had to use the arrow to click on the advance text bar located to the right of the screen. Some of the historical references in German were displayed as gibberish because of the difference in alphabet characters. Finally, the small images above the text must be enlarged to be viewed because one cannot get a sense of the picture's content from the standard view. Therefore, virtually every picture must be enlarged and evaluated by the reader. One can split the screen and scroll the enlarged pictures along the text, which makes this task more tolerable.

Overall, this CD-ROM will be useful to those who are comfortable with new technology, travel frequently with a desktop computer, or wish to carry around a library of CD-ROM "books" in compact form. Unlike traditional book reference activity, obtaining information from CD-ROM requires some additional training and access to computer terminals. Finally, one should not mistake this CD-ROM for a complete reference source that deals with all aspects of pain. It serves more as a practical reference to the average pain physician engaged in daily clinical practice.

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