## REVIEWS OF EDUCATIONAL MATERIAL

Mark A. Warner, M.D., Editor

Anesthesia in Cosmetic Surgery. Edited by Barry L. Friedberg, M.D. Cambridge, United Kingdom, Cambridge University Press, 2007. Pages: 263. Price: \$95.00.

You know you are in for an interesting read when in the foreword the author is compared to Einstein in 1905. The implication of the foreword is that novel theories, whether about relativity or anesthesia for cosmetic surgery, may initially be considered heresy but prove to be correct over time. Anesthesia in Cosmetic Surgery does not disappoint readers: It is an engrossing book with novel ideas about one of our fastest growing fields of specialty.

The book is divided into two main parts. The first is dedicated to the description of anesthesia techniques, while the second deals with peripheral, but nonetheless important, aspects of the practice of anesthesia in an office setting. It also includes two very interesting appendixes covering nutrition in the patient undergoing cosmetic surgery and another curiously covering a contributor's own experience as an expert witness in judicial cases.

The first thing that catches your attention when reading this book is the dedication and passion Dr. Friedberg has put into the development of what he calls "minimally invasive anesthesia" (MIA). This is the name he has chosen to give to a drug combination of propofol, ketamine, and clonidine supplemented with Bispectral Index monitoring, which he claims is practically infallible and has minimal side effects for patients undergoing cosmetic surgery. This MIA technique is the foundation of the book, and the tediousness of its description is counterbalanced by the enthusiasm and self-promotion that the author provides. The selfpromotion includes frequent references to the author's personal case log and experiences with MIA, both of which are used to support most of the book's contentions about the utility of MIA.

Therein rests the book's main limitation: Most of the methods presented and supportive evidence are developed from the author's personal perspective. The efficacy of MIA is not cemented by outcomes from large clinical trials. On the other hand, the book is written by authors well versed in the area of cosmetic surgery, making it a valuable apprentice-type text. The final result reads mostly as a how-to, easy-to-follow book rather than an extensive review.

Some specific chapters are worth mentioning. The chapter on lidocaine use in cosmetic surgery is an excellent source for understanding how the concept of dosing and megadosing of this local anesthetic has become so prevalent. One is hard-pressed to find strong evidence on the currently recommended maximum dose of lidocaine of 7 mg/kg when using epinephrine in cosmetic surgery settings. The chapter, well written and unobtrusive, provides a clear insight of how this maximum dosage came to be and provides valuable tips on using this drug safely for cosmetic surgery.

The chapter on regional blocks for cosmetics surgeries of the head and neck is well organized, with numerous illustrations and photographs depicting their performance. Another interesting chapter, albeit rather short, discusses preanesthetic assessment. This chapter includes a subsection on herbal supplements that are so prevalent today, especially in the cosmetic surgery population.

The book also covers important aspects of cosmetic surgery such as the psychological aspects of the patient undergoing cosmetic surgery, regulations that govern ambulatory surgical centers in most states, and business, politics, and medicolegal considerations in the realm of office-based anesthesia. These chapters are compact and full of useful information, even for those who practice outside that setting.

Whether Dr. Friedberg becomes the Albert Einstein of anesthesiology remains to be seen. However, his book seems to hold value for those who care for patients undergoing ambulatory processes when a premium is placed on rapid operating room turnover, attaining street readiness, and maximizing patient satisfaction.

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(Accepted for publication June 27, 2008.)

Anesthesia for Cardiac Surgery, 3rd Edition. By James A. DiNardo, M.D., and David A. Zvara, M.D. Malden, Massachusetts, Blackwell, 2008. Pages: 463. Price: \$174.95.

Nearly 10 yr ago, I read Anesthesia for Cardiac Surgery, 2nd Edition. At that time, Dr. DiNardo's text was recommended by many of the faculty and residents at our institution as a readable, informative text. Therefore, I was pleased to be asked to review the newer, updated version of this popular book. In the third edition, I found both familiarity and change as well as improvement and, unfortunately, some disappointment.

In the preface, authors DiNardo and Zvara describe their desire to create a cardiac anesthesia text that fills a perceived niche between large, definitive textbooks and smaller, outline-based handbooks. The third edition, like the second edition, meets this goal admirably. With its organized and well-written text, this book can easily be read cover to cover by a resident during the course of a 1- or 2-month rotation. Anesthesiologists in busy practices would also find this easy-to-read text to be a useful reference and concise review of current concepts in cardiac anesthesia.

The updates found in the third edition are extensive and quite apparent to those who have read the second edition. For example, the chapter devoted to mechanical assist devices contains a comprehensive review of the function and design of many of the newer devices, including axial flow pumps such as the Jarvik 2000 (Jarvik Heart, Inc., New York, NY) and the HeartMate II (Thoratec, Pleasanton, CA). Similarly, the chapter discussing valvular heart disease includes a brief description of some percutaneous approaches to valve repair. A table from the 2006 American College of Cardiology-American Heart Association task force guidelines for the management of valvular heart disease has also been included.

The organization of the third edition remains largely unchanged compared with the previous edition. In fact, although this new edition contains almost 50 more pages than the previous version, the number of chapters (13) remains the same. While some topics have been combined or slightly reorganized, readers of this newest edition will still find chapters devoted to preoperative evaluation, monitoring, cardiopulmonary bypass, myocardial preservation, and mechanical assist devices along with chapters detailing the anesthetic management of surgery for coronary artery disease, valvular heart disease, congenital heart disease, pericardial disease, and diseases of the thoracic aorta. This book clearly focuses on preoperative evaluation and intraoperative management of cardiac surgical patients. Those seeking information on postoperative care of cardiac surgical patients should look elsewhere. Similarly, those interested in a review of dysrhythmias or pacing will be disappointed.

Some differences between the second and third editions become apparent on the title page and continue throughout the book. Lead author DiNardo has been joined by coauthor Zvara, who replaces the two contributing authors of the second edition. In addition, the publisher has changed. Readers will note that the text of each chapter is no longer specifically referenced in the new edition. In the second edition, as many as 285 references were listed at the end of a chapter. The third edition drops specific citations in the text in favor of a short list of "suggested readings" (typically five to eight) at the conclusion of each chapter. In my opinion, the substitution of hundreds of specific references in favor of a few "suggested readings" does not serve the reader, though it certainly does make writing the book considerably

easier. Furthermore, the few color echocardiographic images that were present in the second edition have been replaced entirely by black-and-white figures in the third edition.

Many of the strengths of the second edition are present in the third edition as well. Preoperative cardiac testing modalities, including echocardiography, nuclear techniques and angiography, are particularly well covered. Also, the entire text maintains a strong focus on cardiovascular physiology, providing a nice framework and rationale for the anesthetic management strategies that are presented. Ventricular pressure-volume loops are plentiful as are simplified diagrams of congenital lesions that include expected flows and saturations at various locations within the circulation.

Overall, the treatment of congenital heart disease is quite comprehensive, perhaps reflecting the lead author's employment at a children's hospital. Occupying nearly 20% of the text, the chapter devoted to the anesthetic management of congenital heart disease is by far the longest in the book. In addition to detailing anesthetic management strategies, this chapter describes a large number of lesions, physiologic consequences, and approaches to surgical correction. Although the bias toward congenital heart disease may not be reflective of the distribution of cardiac surgical cases in many practice situations, the heterogeneity and complexity of congenital heart disease probably warrants this expanded coverage. Indeed, this lengthy chapter would serve as a nice reference for those who encounter congenital heart disease only occasionally.

While the efficient writing style, the strong physiologic basis of management strategies, and the clear organization of chapters have remained intact in the third edition, the actual production quality has diminished markedly since the previous edition was published. Frankly, the number of typographical and spelling errors in the new edition is astonishing. I actually considered the possibility that I had been given a publisher's proof instead of a final copy. A quick trip to our library and the examination of two other copies of the book eliminated this possibility. The first error I encountered was on the title page, where Dr. DiNardo's institutional affiliation is listed as "Children's Hospital Bostan." Other notable errors include two spellings of the name "Fogarty" (catheter) on page 281. Similarly, nitroglycerin is abbreviated as both "NTG" and "TNG" in the same paragraph on page 266. In general, the typographical and spelling errors are merely a nuisance. However, in several instances, the mistakes are potentially problematic. For example, the recommended dose of dexmedetomidine listed on page 114 is 0.1-0.7 mg/kg/min. This represents a 60,000-fold deviation from the recommended dose of 0.2-0.7  $\mu$ g/kg/h. Other terms such as "retrograde cerebral cardioplegia" (found on page 304) clearly represent typographical errors yet could be confusing for trainees. The errors in proofreading and editing listed above represent only a fraction of those found in the book.

The book is also plagued by internal inconsistencies. For example, on page 37, the authors declare that a nonindexed aortic valve area of 0.5–0.8 cm² represents moderate stenosis, whereas an aortic valve area less than 0.5 cm² is indicative of severe stenosis. However, on page 79, an aortic valve area less than 0.8 cm² is equated with severe stenosis. Also, the authors report on page 121 that dobutamine has "balanced"  $\beta_2$  and  $\alpha_1$  activity in the dose range of 5–20  $\mu$ g/kg/min. Yet on page 153, dobutamine is declared to have "no  $\alpha$ -adrenergic activity" in this dose range.

Another example of suboptimal editing is found in the unnecessary duplication of large figures. For example, Chapter 3 includes two large diagrams detailing the assessment of diastolic function by transesophageal echocardiography. Curiously, these same two diagrams, each consuming more than half a page, are duplicated in the very next chapter. Incidentally, the discussion regarding the assessment of diastolic function by transesophageal echocardiography, which occupies more than two pages, seems disproportionate when the reader realizes that the use of transesophageal echocardiography to determine ejection fraction and fractional shortening is only described in the legend of figure 4.12.

While some figures are duplicated unnecessarily, the quality of other figures is remarkably low. A number of the transesophageal echocardiography images are so dark that they cannot be interpreted. For example, figure 5.11 attempts to show the diastolic doming of a rheumatic anterior mitral leaflet. Because of the extremely dark reproduction of this image, the included arrow essentially points at black space. Again, this text contains no color images.

In summary, it is difficult to issue an overall recommendation regarding this book. On the one hand, the length, writing style, and readability are excellent. Similarly, the strong physiologic basis for management strategies and the highly current nature of the included material weigh significantly in its favor. The topics presented represent those likely to be encountered in any practice of cardiac anesthesia. On the other hand, I have never read a medical text that contains so many typographical and spelling errors. While most of these errors are simply bothersome, others generate misinformation. Internal inconsistencies and poor attention to figure reproduction further degrade the quality of the book. Ideally, the editors would carefully reread and correct the entire text and print it again. If this were to occur, I would recommend it wholeheartedly.

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(Accepted for publication June 27, 2008.)