

Book and Multimedia Reviews

Organ Preservation, Vol. 37, No. 2 of International Anesthesiology Clinics.

Roysten D, ed. Philadelphia: Lippincott Williams & Wilkins, 1999. ISSN 0020-5907. 130 pages, \$61.00.

Although the title of the book may suggest the preservation of organs for transplantation, the authors' objectives were to review molecular pathogenesis of organ dysfunction and scientific rationale for specific interventions and treatments of organ dysfunction associated with cardiac surgery. The book is composed of five chapters; the host defense system by cellular blood components, myocardial protection during cardiac surgery, pulmonary hypertension after cardiac surgery, the role of the intestines in postoperative morbidity, and renal preservation.

The first chapter contains an in-depth description of the cellular host defense system and hemostasis contributed by neutrophils and platelets, respectively. The review of molecular interaction of inflammatory response and hemostasis is informative. It appears that the authors' intention was to describe hemostasis as a part of inflammatory response or a host defense mechanism. However, a relatively weak description of the interaction of two systems gives an impression of one chapter with two isolated topics.

The chapter on myocardial preservation describes mechanisms of myocardial stunning, determinants of coronary blood flow, and myocardial protection by chemical cardioplegia and ischemic preconditioning. Pulmonary hypertension observed during cardiac surgery and cardiac transplantation is described in the third chapter. Description of pathophysiology of pulmonary hypertension during and after cardiac surgery and cardiac transplantation is quite extensive. In addition, the rationale and mode of treatment including nitric oxide, prostacyclin, phosphodiesterase inhibitors, adenosine, adrenomedullin, and mechanical support are described. The effect of translocation of intestinal bacteria and endotoxin into the systemic circulation on the development of the systemic inflammatory response syndrome is described in the fourth chapter. In addition, the authors describe potential causes of mucosal hypoxia, various methodologies of monitoring mucosal perfusion status, and approaches to preventing postoperative gut-derived complications. The chapter on renal protection describes potential causes and interventions of postoperative renal dysfunction. The authors, however, do not comment on molecular mechanisms of renal dysfunction.

Overall, this monograph describing organ dysfunctions associated with major surgery is easily readable for most clinical anesthesiologists. It is admirable that the authors tried to cover molecular mechanisms of specific organ dysfunction and relate to clinical complications and their interventions. There are two drawbacks in this book: 1) the other two major organ functions, namely central nervous system and pulmonary system, are not addressed and 2) the difficulty in combining molecular biology and clinical science results in superficial coverage of both areas. The authors, however, have achieved their objectives if they were able to deliver a scientific background of organ dysfunction to clinicians.

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The Merck Manual of Diagnosis and Therapy. 17th ed.

Berkow R, Beers MH, eds., Whitehouse Station, NJ: Merck Company, 1999. ISBN 0911910-10-7. 2833 pages, \$35.00

The 17th edition of *The Merck Manual* is the "centennial edition," and it is a gem! In 2833 pages, all of medicine is reviewed, albeit briefly, in 23 chapters by a 17-person editorial board assisted by 25 reviewers, 21 contributors, and 276 consultants, only one of whom has an appointment in an anesthesia department. What especially makes this edition a gem is the accompanying complimentary copy of the first edition published in 1899, and the contrast between that 192-page edition and the centennial edition bears witness as to how far medicine has come in the past 100 yr. The first edition is essentially a list of drugs in the United States Pharmacopoeia and their indications, ranging alphabetically from absinthin (for anorexia and constipation) to zinc valerianate (for diabetes insipidus and neuralgia). Interestingly, the recommended treatment of eclampsia, indexed as "puerperal convulsions," includes chloroform but not magnesium sulfate, also listed in the first edition, while one is admonished never to administer chloroform near a flame as "an irritating perhaps poisonous gas" may be produced.

What of the 17th edition? Yes, just covering all of medicine in a single volume is an ambitious task. The 177-page index is itself a masterpiece, which cross-references subjects, e.g., there are 8 references under "anesthetics" and 75 under "pain." Of necessity, attempting "to provide useful clinical information to practicing physicians, medical students, interns, residents, nurses, pharmacists, and other health care professionals in a concise, complete, and accurate manner" (as stated in the foreword) frequently sacrifices completeness to be concise. The 7-yr enterprise culminating in the 17th edition is certainly current. Topics such as prion diseases, death and dying, and drug therapy in the elderly are all addressed.

What of anesthesia? While there is no section devoted to anesthesia, the material covered in various areas is accurate, albeit brief, e.g., obstetric anesthesia is succinctly covered in three paragraphs that acknowledge the dominance of epidural anesthesia among regional techniques and caution against the use of general anesthesia in routine delivery. Similarly, the contribution of "an anesthesiologist experienced in pain management" in the treatment of pain in the dying patient is acknowledged.

In summary, *The Merck Manual* remains the most widely used general medical textbook, with more than 10 million copies sold worldwide in 16 languages. As the medical profession becomes more specialized, the need for ready availability of quickly accessible information about other specialties can be met with this textbook. Truly, the price of \$35.00 makes this a most underpriced gem. The 16th edition was made accessible on the Internet at no charge. Although the Internet has made much information about medicine available, perhaps the authenticity of much of that other information lacks the rigorous review process of *The Merck Manual*.

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Complications of Regional Anesthesia.

Finucane BT, ed., Philadelphia: Churchill Livingstone, 1999. ISBN 0-443-07536-0. 360 pages, \$50.00.

Regional anesthesia has evolved significantly since Daniel C. Moore's 1955 textbook, *Complications of Regional Anesthesia*. (Dr. Finucane's text is not the first, as he and his publisher claim.) The editor has gathered a distinguished group of international experts to update our knowledge of the subject. Many new areas, such as the application of regional anesthesia to acute and chronic pain, are included. The specific chapters on obstetric and pediatric anesthesia and the special application of catheter techniques are also useful. The chapter on the evaluation of neurologic injury after regional anesthesia is particularly helpful, including newer information about the use of electromyography or CAT scan and MRI technology as well as the use of radionuclide imaging. This information is not available in the sections on complications in standard regional anesthesia texts. Likewise, the section on the medicolegal process in the United States is unique and helpful, although the attempts to define the "standard of care" are not well substantiated with evidence-based conclusions.

Overall, the book is an ambitious attempt on an important subject for practicing anesthesiologists, but it suffers the problems of a multiauthored text. There is inevitable overlap in several of the chapters about nerve injury, as well as some distressing omissions and slights. The issue of epidural safety steps has been the subject of multiple studies and reviews in the last 5 yr, but the chapter on local anesthetic toxicity contains only two sentences and one reference about this subject, despite devoting three pages to the history and pharmacology of systemic toxic reactions. "Epidural test dose" is not listed in the index. Such a critical development in the avoidance of the most common complication of regional anesthesia deserves at least a critical commentary. The chapter on obstetric anesthesia likewise refers the decline in maternal mortality related to increased safety in obstetric anesthesia practice, but does not delineate the specific safety steps that are appropriate (or inappropriate!) in obstetric analgesia. Another major controversy currently in regional anesthesia complications is the risk of regional techniques in the presence of anticoagulation. This 1999 text does not include much of the information that is available, including the 1998 American Society of Regional Anesthesia consensus conference about the extent of this risk and the appropriate precautions. There is even an implication on page 327 that low molecular weight heparin

can be monitored with a partial thromboplastin time. However, there is a well balanced discussion of the other major current "complication" of regional techniques, the problem of "transient neurologic symptoms" after spinal anesthesia. Additionally, the text includes many references to the American Society of Anesthesiology Closed Claims data, which help to put the frequency and severity of complications into a more focused and data-driven perspective.

There are several minor annoyances. The opening chapter includes the distressing implication that regional anesthesia cannot be practiced except in the presence of an anesthesia machine, which is inconsistent with the current use of "induction areas." That same chapter devotes more discussion to the Finapres monitor (Datex-Ohmeda, Louisville, CO) than to the design and materials appropriate for epidural catheters.

Overall, the book makes many worthwhile contributions. It is clearly written with plentiful illustrations and an easy-to-use format. The references are extensive, and the breadth of the coverage of material is wide. The authors are clearly experts, and their experience and knowledge make the book worthwhile.

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Books and Multimedia Received

Receipt of the books and multimedia listed below is acknowledged. Selected books and multimedia from this list will be reviewed in future issues of the Journal.

The Journal solicits reviews of new books and multimedia from its readers. If you wish to submit a review, before proceeding please send a letter of intent, identifying the book or multimedia in question, to Norig Ellison, MD, Department of Anesthesia, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, PA 19104-4283. The Journal reserves the right of final decision on publication.

Benumof JL, Saidman LJ, eds. *Anesthesia and Perioperative Complications*. 2nd ed. St. Louis: Mosby, 1999. ISBN 0-8151-2619-0. 832 pages, \$129.00.

Gabel RA, Kulli JC, Lee BS, Spratt DG, Ward DS. *Operating Room Management*. Boston: Butterworth Heinemann, 1999. ISBN 0-7506-9911-6. 224 pages, \$65.00.

Katcher BS. *MEDLINE, A Guide to Effective Searching*. San Francisco: Asbury Press, 1999. Hardcover: ISBN 0-9673445-9-X, \$45.00. Softcover: ISBN 0-967445-0-6, \$29.00. 149 pages.

Wahba RM, ed. *Atlas of Applied Respiratory Physiology*. Montreal: McGill University, 134 pages.