

back into those red cells from either the warm plasma or, in the case of washed RBCs, the recipient's pool of labile potassium. The single paragraph on plasma products for volume expansion is grossly inadequate. He quotes 21 days as the shelf life of blood and red blood cell concentrates. Coagulation factors are given Arabic numerals in the liver chapter and Roman numerals in the hematology chapter.

I can't imagine why any anesthesia resident or practicing anesthesiologist has not already purchased a copy of the first edition. Any who have not should rush out and buy the second edition. The problem the second edition poses is for the proud possessor of the first. Should he update? In view of the nearly unchanged text of the first nine chapters, I would hesitate to recommend automatic purchase unless the reader, having scanned the new chapter 12 on nutrition, believes this alone worth the price. Of course, departmental libraries, hospital libraries, and compulsive bibliophiles also will want a copy. That's how I got mine.

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Management of Epidural Analgesia in Childbirth, Second Edition.
By B. A. WALDRON. New York, Churchill Livingstone, 1983. Pages: 86. Price: \$4.95.

This small (86-page) book was written to give a basic explanation of all aspects of epidural anesthesia to the nonanesthetist (midwife, obstetrician) or the anesthetist in training.

The book begins with a brief history of epidural analgesia and obstetric methods for pain relief. The neural pathways for obstetric pain are described. Epidural block produces physiologic effects, in addition to providing pain relief. These effects are reviewed. Indications and contraindications for epidural anesthesia—both absolute and relative—are presented. The techniques of lumbar epidural and caudal epidural are described, along with a listing of the doses and drugs to be used. Common problems and neurologic complications are presented. The book concludes with a description of epidural anesthetic records and protocols to be used by midwives for "top up" doses.

The text is written clearly and contains figures that are easy to understand, although I would recommend holding the epidural needle by a hand that is in continuous contact with the back to allow better control of the needle.

I would have expected a more complete discussion of intravenous fluids management, with emphasis on acute hydration with crystalloid before the first injection of local anesthetic. Common American practice is to give at least 1,000 ml nondextrose-containing crystalloid before an epidural for vaginal delivery and at least 1,500 ml before an epidural for Cesarean delivery, in order to decrease the incidence of hypotension and supine hypotension syndrome.

Despite the shortcomings described above, the book does contain useful information for the nonanesthetist or the anesthetist in training. For the anesthetist with experience in epidural anesthesia, this book appears too elementary.

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Control of Respiration. EDITED BY D. J. PALLOT. New York, Oxford University Press, 1983.

The nine chapters of this book do not provide a comprehensive coverage of the regulation of respiration (as the title might suggest); selected topics are covered. Depth of coverage and style vary. Some of the chapters do provide an overall review of circumscribed areas for the nonspecialist, as promised in the preface; others are rigorous and detailed reviews of interest to those doing research in the particular area under review (e.g., Central Chemoreceptors by H. Loeschcke, or Respiratory Reflexes by A. Trzebski). In some chapters, references are given to original papers published in 1983. This impressive speed of producing the book, unfortunately, is reflected in poor editing of the text in some chapters, in many typographic errors, and in deficient legends to some graphs.

Some chapters in the book will be of interest to researchers in the field of regulation of breathing; for the nonspecialist, there are better and more comprehensive sources to consult for overview (e.g., *Regulation of Breathing*, edited by T. F. Hornbein).

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Chest Medicine. BY R. B. GEORGE, R. W. LIGHT, R. A. MATTHAY, New York, Churchill Livingstone, Inc., 1982. Pages: 657. Price: \$49.50.

This multiauthored text (13 contributors) is stated to be ". . . designed for use by medical, nursing, respiratory therapy students as well as housestaff physicians and (pulmonary) fellows in training. . . ." In their attempt to be all things to all people, the authors may have created an insurmountable problem. For example, in the chapter, Structure of the Respiratory System, we read that "the adenoids, tonsils, and eustachian tubes are located in the nasopharynx." A few chapters later, we read that the Henderson-Hasselbach equation can be quoted as

$$[\text{HCO}_3^-] = 0.0301 \text{ Pa}_{\text{CO}_2} \times 10^{\text{pH}} - 6.1''$$

Overall, the text probably is best suited to the general internist not specializing in pulmonary medicine. For the anesthesiologist, it offers a useful reference for matters relating to chest diseases but it is not sufficiently detailed for those specially interested in respiration.

Twenty-four chapters are divided into three sections, entitled Pulmonary Structure and Function, Collecting the Data Base, and Clinical Patterns of Lung Disease. There are particularly good chapters on acid-base balance, chest radiography, pulmonary function testing, diffuse interstitial disease, and pulmonary vascular disease.

In some instances, one finds information in a strange setting. For instance, a cookbook approach to the ER management of smoke inhalation is included in the chapter on Occupational and Environmental Lung Diseases, rather than as a part of Respiratory Failure. Although dyspnea is described as an important symptom in the chapter on History and Physical Examination, one has to go to the chapter on Exercise, Exercise Testing, and Disability Evaluation to find a useful classification of grades of dyspnea.

Omissions noted include a description of sputum examination. There was no account of smear preparation and staining or pictures of commonly seen bacteria. Interstitial emphysema is not covered, although there is a brief reference to mediastinal emphysema in the section on Diseases of the Mediastinum. In the chapter on Respiratory Infections,

which, overall, is very good, there is no reference to laryngotracheobronchitis and only a brief description of epiglottitis. The comment is made, with reference to aspiration pneumonitis, that ". . . general anesthesia is of greatest risk when surgery involves the upper abdomen or the central nervous system, or is an emergency procedure involving trauma or obstetrics." In discussing therapy of this disorder, PEEP is not highlighted relative to other options. Probably due to the time when the manuscript was prepared, there is no mention of AIDS and related pulmonary infections, although the importance of immunosuppression is well described.

The chapter on Management of Surgical Patients with Respiratory Disease is disappointingly brief and completely omits the special problems that may occur following thoracic surgery. Neither this chapter nor the one on Diseases of the Pleura describes the intricacies of thoracostomy drainage systems. In the discussion of empyema, I could not find reference to bronchopleural fistula or to lateral thoracoplasty, nor was there a description of the significance of a radiographic air-fluid level in association with pleural effusions (mentioned briefly in the chapter on Chest Radiology). The final chapter on Acute Respiratory Failure is brief and does not meet the needs of the anesthesiologist.

In summary, a remarkable amount of material has been crowded into this text which, in its first edition, is somewhat patchy in content. While it provides considerably more information than is available in standard texts of general medicine, it may not satisfy the appetite of the pulmonary specialist.

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Perspectives in High Frequency Ventilation. EDITED BY P. A. SCHECK, U. H. SJOSTRAND, R. B. SMITH. Boston, Martinus Nijhoff, 1983. Pages: 329. Price: \$54.50.

This book is not a primer or handbook of high-frequency ventilation. As the title implies, it represents an amalgam of current advanced thought on the subject.

The text is a collection of the 40 papers presented at an international symposium held at Erasmus University, Rotterdam, The Netherlands, in September 1982. The actual typewritten texts submitted by the authors simply have been reproduced. The reader therefore must tolerate numerous typographic errors and a few mislabeled charts. One author's charts are not included (perhaps at the conference they were projected). The cover-to-cover reader will become weary encountering the same basic introductory remarks over and over again. European authors personally have translated their works into English; this leaves some of the reading difficult to follow. The book's most

intriguing idea, "pneumatic controlled circulation," is, for example, all but lost in a meandering paper that never gets around to presenting any pertinent results. The ordering of papers is organized only roughly; the novice should first read the thirty-third paper! This gives the only true introduction to an overview of the field.

The substance of the book has five main divisions. The papers dealing with theory attempt to explain why high-frequency ventilation works. Ideas about gas transport and diffusion are explored, but the average clinician will find the mathematics burdensome. Nonhuman experimental models are used in another series of papers aimed at solving these same problems. The technical papers show nicely how gas administered at high frequency can be humidified adequately, how tidal volume can be determined cleverly even at 15 Hz, how the various high-frequency modes can be mixed to achieve certain effects, and how the single universal ventilator may soon be feasible. The best-founded papers are those that describe how high-frequency ventilation has been employed to advantage in laryngotracheal and pulmonary surgery, even when lasers are used. The last set of papers deals with the use of high-frequency ventilation in the critical care setting. The notions that high-frequency ventilation interferes less with cardiac performance and causes less barotrauma are refuted seemingly by the clinical data presented. The only randomized clinical trial could demonstrate, as the authors choose to put it, "no advantage of conventional over high frequency ventilatory techniques." Another group of authors is oddly enthusiastic about high-frequency techniques, even though, after transient improvement, 13 of their 15 patients died in respiratory failure.

In general, little is written here about high-frequency oscillation but more about high-frequency positive-pressure ventilation and jet ventilation. A number of interesting applications of high-frequency ventilation are proposed or reaffirmed, including its use: in the presence of bronchopleural fistulas; as a well-tolerated device for weaning; as a handy aid in mobilization of secretions; as an effective mode for ventilation and even delivery of medications during cardiorespiratory arrest; and as a possible method for long-term cuffless transtracheal ventilation.

This book is required reading for those developing and using high-frequency ventilators. The information aimed at those in anesthesia is well presented and helpful. The average intensivist will find much of the book tedious. For the specific setting of critical illness, this volume shows very clearly where we will go next with high-frequency ventilation, but it is not persuasive in explaining *why* we should be heading in that direction.

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