

Book Reviews

B. Raymond Fink, M.D., Editor

Regional Anesthesia: Advances and Selected Topics. EDITED BY MICHAEL D'A. STANTON-HICKS. Boston, Little, Brown and Company, 1978. Pages: 204. Price: PNS.

This book is divided into two sections: four chapters provide a *theoretical* rationale for the safe, clinical application of regional anesthesia; the remaining four offer practical information.

The first chapter contains, perhaps, the most complete and effective comparison available of etidocaine and bupivacaine, based on all published data. For some reason, clinicians seem to have adopted an "either-or" attitude to these two new long-acting drugs. This chapter provides information about the strengths and weaknesses of each, and the indications and relative contraindications for each. The second and third chapters probe the basic theories and computerized models of the pharmacokinetics of the local anesthetic agents and endeavor to correlate these with the few human data available. Although the experts in this field have developed a special interest in the role of the lung, there is little clinically relevant material to be presented. The references do not include the volume *Nonrespiratory Functions of The Lung and Anesthesia*, published 12 months earlier in this series.

The fourth chapter, on pharmacokinetics in obstetrics, contains an excellent up-to-date review of the disposition and transfer of local anesthetics from mother through placenta to fetus. However, so long as the clinical outcome of anesthesia for obstetrics is evaluated by such crude and subjective means as Apgar scores and neurobehavioral signs, the miniscule variations of measured levels of bound and unbound local anesthetics in any of the three compartments remain an intellectual exercise for the "so-called regionalist."

The second portion of the book addresses itself to ". . . the four regional anesthetic techniques that probably are (and should be) performed most frequently." I suspect many readers will query the omission of spinal anesthesia in favor of intercostal nerve block or even sympathetic nerve blocks. Nonetheless, the excellent clinical information included in these chapters may well convince practitioners they should be doing these blocks.

The chapters on epidural and upper arm blocks are interesting contrasts in their respective excess and paucity of detailed review. The sections on non-surgical uses and special therapeutic indications for epidural block present information not likely to have been previously read by anesthesiologists, particularly in the portion on "endocrine modification" of epidural block. The section of intercostal nerve block advises the use of 1–2 ml 1 per cent etidocaine to improve success, but in our hands such small volumes have produced slower onset and shorter durations than volumes of 4–5 ml. Such high concentrations also are not necessary, and only increase risk of toxicity in a technique known to produce the highest blood levels of all peripheral nerve blocks.

This book will be of interest and benefit to the "regionalist," because it does supply, especially in the chapter on sympathetic blocks, new information not as well summarized in any other publication, and will encourage other anesthesiologists to increase the role of regional anesthesia in their practices.

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Drugs in Anaesthetic Practice. Fifth edition. BY M. D. VICKERS, F. G. WOOD-SMITH and H. C. STEWART. Woburn, Mass., Butterworths, USA, 1978. Pages: 604. Price: \$29.95.

Surely this must be the best available anesthesiologic pharmacology text of its size. In this revision, 29 drugs have been deleted and 11 new monographs have been added. Many excellent drugs discussed are available in Europe but have not yet received F.D.A. approval for clinical use in the United States. On the other hand, a few drugs, such as lithium, bretylium and glycopyrrolate, which with advantage could have been included, have been omitted. Naloxone is classified as a system analgesic, and to find the section relating to enzyme induction one must look in the index under "Enzymes inhibition of drugs." Useful for the United States reader is a list of US official and approved names that differ from their UK equivalents.

The format represents an improvement on the previous edition; the pages are longer and easier to read. This book is a first-rate text and a useful reference source for all involved in the practice of anesthesiology.

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Adverse Response to Intravenous Drugs. BY J. WATKINS and A. MILFORD WARD. London, Academic Press, 1978. Pages: 188. Price: £8.20.

This monograph consists of abstracts of the 14 papers presented at the University of Sheffield Medical School in 1977, and an appendix discussing the symposium. The first chapter, on pharmacokinetic aspects of the intravenous bolus, sets the stage for general and more specific discussions, of various adverse reactions to intravenous solutions and their additives, plasma substitutes, Althesin, thiopental and other barbiturates. Hypersensitivity, anaphylactoid reactions, and intradermal testing in the diagnosis of allergic reactions are also dealt with. The narcotics—morphine and meperidine—and the muscle relaxants—*d*-tubocurarine and pancuronium—are conspicuous by their absence, because of time constraints in a symposium.

Nevertheless, this small monograph contains a wealth of information useful to both the academically oriented and the practicing anesthesiologist.

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Yearbook of Anesthesia, 1978. EDITED BY J. E. ECKENHOFF, A. J. BART, E. A. BRUNNER, H. S. HOLLEY, AND H. W. LINDE. Chicago, Yeark Book Medical Publishers, 1978. Price: \$22.95. Pages: 352.

This book consists of close to 250 abstracts of articles on basic sciences and the clinical practice of anesthesia, selected from more

than 80 North American and western European journals. The abstracts are concise and clear, and many of them are followed by brief editorial comments that help in interpreting the conclusions or the clinical significance of the parent articles. Interspersed in the text are various tables and figures.

The book covers a wide range of topics, organized into 23 chapters. A third of it is taken up by pharmacology, physiology and pathology; the other two thirds by practical aspects of anesthesia. Lists of recent review articles, a short quiz, and geneous and accurate author and subject indices enhance the usefulness of the book.

The volume is well produced, printed in clear and easily legible type, and well edited, except for a transposition of figures on pages 17 and 18. It should be particularly useful to the busy practitioner and to the trainee brushing up for board examinations. Its main virtue is that it brings to the attention of readers papers published in other than anesthesia journals, wherefrom more than four fifths of the abstracts originate.

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Mechanical Misadventures in Anesthesia. By GORDON M. WYANT. Toronto, University of Toronto Press, 1978. Pages: 174. Price: \$15.00.

The author reviews many of the misadventures that occur in anesthesiology secondary to problems with mechanical equipment. The first chapter deals with nonflammable gas pipeline systems. It covers the various problems associated with crossing of lines, mishaps with pressure-relief valves, and similar occurrences. In addition, the importance of testing new pipeline systems is strongly emphasized.

Another chapter deals with incidents related to anesthesia machines, and covers difficulties with cylinders, inoperable pin-index systems, improper pressure regulators, improper positioning of flowmeters, the use of nonapproved colors for control knobs for anesthesia gases, *et cetera*. In addition, the hazards and errors in the use of various vaporizers are stressed.

The next chapter deals with breathing circuits. Emphasis is especially given to carbon dioxide absorption and valves. A timely section on scavenging devices is also presented. Another chapter deals with anesthesia machine accessories such as ventilators and sphygmomanometers.

The last chapter deals with airways, endotracheal tubes and cuffs, epidural catheters, and the like. Although the first three chapters, which deal with the gas pipeline systems, the anesthesia machine, and the breathing circuit, provide fascinating reading, since most of the equipment is either of British or Canadian vintage, the anesthesiologist in the United States will have difficulty relating to his fellow anesthetists' problems. The last two chapters of the book, however, deal with equipment that is familiar to most anesthesiologists. There is an appendix with a "Suggested Anaesthetic Check List," which everyone who administers anesthesia would do well to follow.

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Manual of Surgical Therapeutics. Fourth edition. Edited by ROBERT E. CONDON AND LLOYD M. NYHUS. Boston, Little, Brown and Company, 1978. Pages: 511. Price: \$10.95.

The purpose of this manual is to "present the general principles involved in the pathophysiological, pharmacological, and nonoperative aspects of the care of the surgical patient, in an outline format that is handy and, even, indispensable." Perhaps such a compilation could have general utility for the beginning surgical student and house officer. However, I found examples of generalities that were often inaccurate or confusing. For example, when discussing pre-operative medication, atropine, 0.4 mg, was suggested for every patient whether under local or general anesthesia.

In discussing renal failure, the admonition is added that succinylcholine should be avoided because that muscle relaxant is "excreted primarily by the kidney." The syndrome of malignant hyperthermia is described but called "anesthetic hyperthermia," and the treatment proposes "paralysis of the muscles to curate to prevent further heat generation," a therapy that demonstrates a dangerous lack of understanding of the underlying pathophysiology. No mention is made of dantrolene.

In short, I did not find this manual useful.

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Physiological Aspects of Anaesthetics and Inert Gases. By A. G. McDONALD AND K. T. WANN. London, Academic Press Inc. (London) Ltd., 1978. Pages: 308. Price: £17.50.

This is a book that promises much and delivers more. It presents a wealth of well-digested, well-organized information about the fundamental cellular and subcellular effects of anesthetics, seen from the viewpoint of general physiology. Incisive definitions cut through rampant confusion with unambiguous common sense: "A local anesthetic reversibly blocks axonal conduction and can thereby abolish the perception of pain without affecting the individual's consciousness. . . ." "A general anesthetic is a substance which can bring about general anesthesia," which, as the authors point out, is preferable to the broad embrace that includes detergents and the still broader "an anesthetic is a substance which, when injected into an animal, produces a scientific paper"!

After a brief, perhaps too brief, foray into theories of anesthesia, (omitting any mention of calcium), the authors settle down to a description and discussion of individual cellular and subcellular phenomena affected by these agents.

First considered are effects on cellular structure, movement and division. Here, as throughout the book, many of the principal facts of observation are marshalled with economy and clarity, and in logical sequence. Regrettably, however, the discussion of teratogenicity is skimmed and immunologic effects are not mentioned at all, and readers thirsting for a molecular understanding of the observed facts are likely to be somewhat disappointed. Perhaps this is unavoidable, since the target molecules are unknown and their relationships to the visible effects obscure. But not so, as the very next chapter on biochemical effects admirably demonstrates. Here the authors survey hydrophobic interactions and hydrate formation, effects on membrane-bound enzymes, including those of mitochondria and of microsomes, and the interaction of anesthetics with bioluminescence. The treatment is somewhat mathematical, and requires acquaintance with elements of reaction theory, some of which are thoughtfully supplied in a brief introductory outline of enzyme kinetics. Effects observed on inexcitable membranes, synthetic membrane, and the erythrocyte membrane, in that order, follow, and once again one can only thank the authors for their