The Anesthesiologist's Bookshelf

Edited by MEREL H. HARMEL

Applied Pharmacology. By ANDREW WILSON AND H. O. SCHILD. Tenth Edition. Pp. 721, 216 illustrations. Boston, Little, Brown and Company, 1968. $9.60.

This text begins with an introductory historical review of the principles on which prior generations of physicians based their practices of medicine, extending from the empiricism of Galen through the homeopathy of Hahnemann to the present scientifically-based system of therapeutics. The remainder of the book presents a foundation for the rational use of drugs based on the scientific approach. This begins with three chapters devoted to general pharmacologic principles, *i.e.*, drug-receptor interaction, general modes of drug actions, methods of drug testing, the use of dose–response curves, and a discussion of the absorption, fate and excretion of drugs. These chapters are followed by a systematic presentation of drug groups in the classic manner, *i.e.*, pharmacology of the autonomic nervous system, of the circulatory system, of the central nervous system, etc. Most chapters begin with a brief resumé of the applicable physiology, followed by a general discussion of pertinent drug groups and of specific drugs. Specific modes of drug action and specific drug toxicities are cited, but there is little discussion of structure–activity relationships in most areas. The style of writing is clear and pointed and the text is easily read. Numerous line diagrams and reproductions of graphs and pictures add to the clarity of the material presented, but the discussions are more superficial and less detailed than those found in the most widely used American textbooks of pharmacology.

This edition gives the impression of being an updated version of a standard established text, but it lacks the foresight which might be expected in a proven work. In this era of organ transplantation a students' textbook of pharmacology could be expected to present a discussion of graft rejection and of the use of drugs for immunosuppression. One searches in vain for such a discussion. There are other examples where current knowledge of future import has not been included. The chapter on endocrine fails to mention the recent work of Porte on the sympathetic control of insulin secretion and of the effects of adrenergic blocking agents on this mechanism. The chapter on general anesthetics refers to Meyer, Overton and Ferguson in discussing mode of action but fails to mention the more recent theories of Miller and Pauling. The concept of minimal anesthetic concentrations, useful in describing anesthetic potency, has not been mentioned. A page and a half is given to describing chloroform but only a line and a half to methoxyflurane. Ethacrynic acid, furosemide and chlorthalidone share a three-and-a-half-line discussion under the title "Other Diuretics with Similar Actions." The student searching for information about drugs which he meets in use today, during his training, may be disappointed when he looks to these pages for answers. The more important question is whether the limited information contained on these pages is sufficient to prepare him for his practice of tomorrow.

This book will be a welcome addition to a departmental library for it will serve as a source from which one can readily and rapidly gain drug information, but its use requires the availability of a more comprehensive companion text because of the limitations noted above. For those who actively read the English literature it may serve as a source for English–American translation of drug names.

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Pain: Proceedings of the International Symposium on Pain, Paris, April 11–13, 1967. EDITED BY A. SOULAIRAC, J. CAHN, AND J. CHARPENTIER. Pp. 562. London and New York, Academic Press, 1968. $19.50.

This book is a record of the proceedings of the Symposium organized through the Laboratory of Psychophysiology of the Faculty of Sciences in Paris. The Symposium consists of a review of important progress in the physiology, pharmacology and pathogenesis of pain, with specialists in the various fields reporting on their work. Some fifty scientists attended the symposium and presented papers or took part in the discussions.

The Presidential address by A. Soulairac was excellent. He spoke on "An Experimental Approach to Pain" and summarized in concise fashion the most modern concepts of pain mechanisms. Another presentation of particular interest to anesthesiologists who work with patients in pain is that of Melzack and Wall on "The Gate Control Theory of Pain." They present good evidence that gating and selection of sensory information may occur at successive synapses at any level of the central nervous system. In fact, the entire first section of the symposium, devoted to neurophysiological and psychophysiological bases of pain, is well worth reading for any student of pain mechanisms.

The major portion of the book is devoted to an evaluation of experimental methods for testing analgesics in animals and man, and is of much greater interest to those involved in research than to the anesthesiologist. For a newcomer to the field of pain research, this section would be of great value because of the variety of approaches

used in testing, as well as for the variety of interpretations of what is being tested.

The section on clinical and therapeutic applications does not contain much of practical use to us. Nevertheless, for those who are confronted with patients who have chronic pain, a reading of this section can at least bring a better understanding of the complexities of the problem. The chapter by Dr. James White is well worth studying, as he discusses various surgical approaches to pain in the torso and extremities. Dr. White is one of the best informed surgeons on the treatment of pain in the world today.

In summary, this is not a book for the practising anesthesiologist unless he wishes to undertake the treatment of pain problems. Activities directed in other fields seem more popular nowadays.

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Appraisal of Current Concepts in Anesthesiology. EDITED BY JOHN ADRIANI. Volume IV. Pp. 464. St. Louis, C. V. Mosby Company, 1968. $12.00.

This book is a collection of current (to 1967) anesthetic literature prepared by the staff and trainees of the Anesthesiology Department of Charity Hospital, New Orleans. There are 50 easily-readable chapters on interesting topics related to clinical anesthesia. However, probably as the result of combining and condensing certain topics, several erroneous inferences appear. For example, on page 21 the term hydrophilic is used synonymously with lipid-soluble. Also on page 21, it is stated that thiopental is detoxified in the brain. The original reference does not corroborate this statement. On page 64, it is implied that ultrashort-acting barbiturates administered orally are poor hypnotics. This is contrary to the results reported by Bush *et al.* (Clin. Pharmacol. Ther. 7: 373, 1966) who demonstrated prompt and predictable hypnotic effects from orally administered ultrashort-acting barbiturates. In the chapter entitled "Halothane versus Cyclopropane Anesthesia for Patients in Shock," there is a lucid explanation for the choice of either agent, but at the end of the chapter the reader is told dogmatically to use cyclopropane. In the chapters dealing with psychological problems of the surgical patient preoperatively and with preoperative medication, no mention is made of the work of Egbert, L. D., *et al.* (J.A.M.A. 185: 553, 1963), who showed the importance of the preoperative visit by the anesthesiologist in allaying anxiety. This book has little to offer the anesthesiologist beginning his residency training, because the brevity and, at times, superficial treatment of the subject matter may tend to confuse rather than elucidate the many and varied problems related to clinical anesthesia. For the anesthesiologist who has kept up with the literature, the topics could only serve as a guide for further in-depth study.

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Physiology of the Nervous System. BY CARLOS EYZAGUIRRE. Pp. 216, illustrated. Chicago, Year Book Medical Publishers, Inc., 1969. $6.50 paper, $8.50 cloth.

Dr. Eyzaguirre, professor and chairman of the department of physiology of the University of Utah College of Medicine, has written this book primarily for the first-year medical student. It is divided into five parts, the first dealing with general neurophysiology, and the remaining four with the application of general principles to the specific functions of sensory systems, motor systems, the anatomic nervous system, and the denervation and trophic functions.

It is the author's hope that by dealing with principles rather than collections of facts, that the student will acquire a better grasp of neurophysiology upon which to build. In this regard the work misses the mark, and it is likely that the first-year medical student, presented with a great quantity of pithy principles, without an opportunity to examine the evidence or gain an appreciation of neurophysiological experimental method, will retain few principles and fail to develop an interest in the subject.

However, for the postgraduate students, such as a resident or practitioner who needs to review and refresh an already-acquired basic knowledge of neurophysiology, the book will serve a useful purpose. The information is in concise form, and important terms or concepts are in italics. The illustrations for the most part are well chosen.

The divisions of the parts are somewhat arbitrary, and not altogether designed for a comprehensive view of the whole. Thus, the muscle receptors are discussed under the sensory system, while reflexes are discussed in the section on motor systems. Although this is justifiable on a logical basis, and cross-reference is made, the integrated picture of nervous system activity, long the goal of neurophysiologists, suffers.

The bibliography is purposely sparse. Unfortunately, this has resulted in its bulk being confined to texts in neurophysiology, which by definition are almost outdated by publication time. The original articles quoted are few, with publication times generally before 1962.

In this reviewer's opinion, the book will serve a limited but useful role as a review for those persons outside neurophysiology, but with a good background in it, who need to brush up and refresh their basic concepts. The very reasonable price adds greatly to its attractiveness for this purpose.

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