

has destroyed this argument, not by setting out to disprove it, but simply by arraying all the data in an objective, orderly and interesting fashion.

If anything, the book errs in the direction of over-thoroughness, but it is never boring and always clear. Each chapter ends with a set of conclusions and a summary. Readers of ANESTHESIOLOGY of every degree will enjoy and profit from this book.

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Pharmacology of Adjuvant Drugs. Volume 10/1, Clinical Anesthesia Series. EDITED BY HOWARD L. ZAUDER. Philadelphia, F. A. Davis, 1973. Pp. 349, \$15.00.

This book represents a thoughtful collection of review articles in areas of pharmacology especially interesting to the anesthesiologist. It is not a comprehensive pharmacology text, which would require far more than 349 pages; nonetheless, most of the contributors appear to have exercised admirable care in presenting "basic" pharmacology correlated with physiology and pathophysiology, and pertinent information relating to clinical anesthesia.

Chapters 2-7 are devoted to autonomic and cardiovascular pharmacology, including vasopressors in obstetrics, and constitute an excellent review of these topics for anesthesiologists. Especially impressive to the reviewer was the chapter on vasopressors and low-flow states by Hershey and Altura. The authors emphasize that the rational use of vasopressors must be based upon a clear understanding of the pathophysiology of shock and that the administration of vasoactive drugs must result in appropriate changes in pressure-resistance-capacitance relationships to improve and maintain tissue perfusion. These ideas are developed through a lucid discussion of microcirculation, including a provocative review of the possible application of vasoactive polypeptides in shock states. This class of drugs has yet to gain access to the pharmacologic armamentarium of the anesthesiologist. As the authors convincingly demonstrate, "the outlook for effective and precise pharmacologic manipulation of the cardiovascular system is very much alive and optimistic."

Interactions of drugs with various anesthetic agents are well presented in the discussion of adrenergic blocking agents. Many problems which frequently face anesthesiologists are discussed. For example, that the cardiovascular depressant effects of propranolol are intensified during the administration of many general anesthetics; beta receptors appear to lose some sensitivity to isoproterenol for as long as 48 hours after administration of propranolol; patients chronically maintained on such drugs as propranolol, reserpine, alpha-methyl-dopa and L-dopa require special anes-

thetic management. Drug interaction is an area to which the anesthesiologist must pay increasing attention, and information about it could well have been included in these chapters.

The second half of the book includes articles on phenothiazines by Lear and tranquilizers and benzodiazepines by Wulfsohn but, regrettably, nothing on narcotics and barbiturates, two of the most common classes of adjuvants used by the clinician. Chapters on hypoglycemic drugs (diabetics), steroids, diuretics, antibiotics, ecobolic agents, and drugs used in respiratory therapy are also included. Controversial subjects such as management of the diabetic patient and the use of steroids in shock and aspiration pneumonia are nicely presented.

The contrasts in style are not disturbing, but there is regrettable variation in the depth of subject coverage. For example, biotransformation and elimination are discussed in the case of benzodiazepines but omitted for phenothiazines and other tranquilizers, although significant in the anesthetic management of the patient. The discussion on ecobolics (drugs that potentiate uterine activity) is disappointing; the interactions of such commonly used agents as halothane, methoxyflurane, and regional anesthesia with ecobolic agents are not discussed.

Figures and illustrations are unevenly distributed, and are noticeably lacking in a few difficult chapters where they could have been very helpful. The first chapter, on receptor concepts, may discourage readers through its free use of terms and expressions from realms of chemistry arcane to the occasional student. Difficult and controversial receptor theories are packed into concise and loaded sentences which will have little meaning for many clinicians and make the gap between basic and clinical pharmacology unduly evident.

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Muscle Relaxants. BY S. FELDMAN. Philadelphia, W. B. Saunders, 1973. Pp. 190, \$14.00.

This book contains a considerable amount of information on the pharmacology of the muscle relaxant drugs, based to a large extent on recent experimental and human studies. The headings of the chapters give an indication of the scope: the history of curare; the anatomy and physiology of neuromuscular transmission; types of neuromuscular block; the site, magnitude and duration of action of muscle relaxants and their binding by proteins; the effects of changes in temperature, pH, and blood flow, and of various pathologic states; the actions of relaxants on several organ systems and on the fetus; the rational use of relaxants; and, finally, the pharmacology of specific