

# Book Reviews

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**Cardiovascular Pharmacology.** EDITED BY M. J. ANTONACCIO. New York, Raven Press, 1977. Pages: 534. Price: \$22.50.

This book presents a selection of review articles by various authors on topics of cardiovascular pharmacology. It is intended to be comprehensive, and useful to students, researchers and physicians seeking to keep up with current developments. To summarize this enormous file in a modest-sized text of 534 pages represents an ambitious, if not overwhelming, task. The contributors made a gallant effort to maintain their objective of being comprehensive and concise.

The lead chapter deals with fundamental principles governing the regulation of circulatory function and provides a good overview of the chapters to follow. Chapter Two covers renal physiology and pharmacology in 33 pages, but with only nine pages on the pharmacology of diuretics and less than one page on the most widely used of these, furosemide. The next three chapters deal with renin-angiotensin, neuropharmacology, and prostaglandins, respectively. They are concise but reasonably complete, with discussions of experimental methods and current concepts that will be especially interesting to investigators.

The next four chapters summarize hypertension, antiarrhythmics, inotropic agents, and shock, and are enjoyable reading. The chapter on hypertension maintains a good balance between pathophysiology and clinical medicine, including a full discussion of antihypertensive agents. The chapter on antiarrhythmic agents presents a lucid discussion of cardiac dysrhythmias based upon electrophysiologic principles, and includes a comprehensive review of antiarrhythmic agents, although, in this reviewer's opinion, biochemical defects and disturbances of excitation-contraction coupling and of calcium metabolism have been significantly implicated in the failing heart and, therefore, deserve more attention in the review of cardiac failure. However, the summary of other positive inotropic agents, including sympathomimetic agents, xanthines, glucagon, and cardiac glycosides, is quite adequate. The sections on the cellular consequences and the myocardial depressant factor of shock would be informative to any reader, and the same may be said of concluding chapters on platelets and platelet aggregation inhibitors, and on coronary circulation, angina pectoris and antianginal agents.

Figures and tables are generally used to advantage in this highly condensed and comprehensive treatise. Although it fulfills its objective, a reader must have sufficient background information to digest properly the enormous amount of information condensed in a modest volume.

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**Mobile Intensive Care Units.** Volume 95. By R. FREY, E. NAGEL AND P. SAFAR. New York, Springer-Verlag New York Inc., 1976. Pages: 271. Price: \$21.20.

The International Committee of Emergency and Disaster Medicine is a multidisciplinary, multi-national group of physicians, nurses, ambulance personnel, administrators responsible for

emergency medical care, manufacturers of goods and services of value in emergency medicine, and interested laymen, who meet in Mainz, Germany, in September of each year. The group is independent of political, national, racial, religious, and commercial influences. This book contains the proceedings of the Symposium on Mobile Intensive Care Units and Advanced Emergency Care Units in September 1973. The book is typical of the series on Anesthesiology and Resuscitation published by Springer-Verlag, in that it is bound by a green paper cover, decorated with a picture of the seedpod from the giant oriental poppy (the source of opium). The book contains 271 pages and is divided into eleven parts: Planning and Organization of the Emergency Medical Services System, Communications, Treatment at the Scene and during Transportation, Continuing Life Support in the Hospital, Data Acquisition and Evaluation, Training of Non-Physicians and Physicians, Emergency Cardiac Care System, Disaster Preparedness and Care, Research and Innovations, and Recommendations, both in English and in German. The 66 individual contributions of 89 authors are grouped into these 11 sections. The majority of the contributions are in English, with German summaries. The remainder are in German with English summaries. Most of the contributions represent a recitation of "How We Do It Back Home." However, some excellent ideas emerge from the pages of this book; for example, "The MAST-1 Garment in Hypovolemic Shock," by Nagel; "Cardiovascular and Other Effects of Transporting Ill Patients," by Woddell; "Care for and Transport of Newborn Babies in the Ambulance Practice," by Takacs; "Blind Defibrillation," by Grace *et al.*; and "Recommendations," which actually consists of a list of abbreviations and their meanings, definitions and guidelines derived from the presentations, and discussions that apparently occurred at the meeting.

The book is valuable in that it collects in a single source summaries of the best efforts in emergency medical care that are currently in progress in the developed and developing countries of the world. The book is recommended for physicians, nurses, ambulance personnel, and administrators interested in emergency medical care.

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**Microbiological Hazards of Infusion Therapy.** EDITED BY I. PHILLIPS, P. D. MEERS, AND P. F. D'ARCY. Littleton, Mass., Publishing Sciences Groups, Inc., 1976. Pages: 186. Price: \$19.50.

This symposium on the danger of contaminated intravenous solutions was triggered by several outbreaks of infection from contaminated intravenous solutions in both the United States and the British Isles.

The book describes containers and closures, growth properties of microorganisms in infusion solutions, the hazards due to additives, extrinsic and intrinsic contamination. Some of the material is repetitious, but all of it should be read by every anesthesia resident and intensivist. The high price of this small volume pre-

cludes individual ownership, but each department should have a copy.

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**Medical Emergencies, Diagnosis and Management.** By R. ROBINSON AND R. STOTT. Second edition. Philadelphia, J. B. Lippincott, 1977. Pages: 193. Price: \$9.50.

This book has been written with the object of giving the newly qualified physician working in the emergency room a concise approach to the diagnosis and management of medical emergencies in the various organ systems. There are thus the usual chapters on cardiovascular and respiratory emergencies as well as chapters on endocrine and psychiatric emergencies. There are also chapters on drug overdosage, hypothermia and, perhaps most usefully, a chapter on general clinical problems, where specific problems such as the hypotensive patient, severe chest pain, and other general clinical situations are presented with their differential diagnoses and cross references for management.

Although the scope is wide, the content is understandably sketchy in a book of this length. Generally, there is a brief discussion of the diagnosis, listing just the major diagnostic features, followed by a section on the management numerically listing the salient points. The book has a bibliographic section of suggested further reading, and this is referred to frequently in the text. Thus, for many details, an alternate text has to be consulted. In addition, frequent cross reference is made to other parts of the text. It can be appreciated that this is done in the interest of conciseness but it is, nevertheless, a frustrating distraction and time waster.

More specifically, the chapters on cardiovascular and respiratory emergencies are adequate; one would perhaps take exception to some of the indications for mechanical ventilation detailed here. The chapters on renal emergencies and overdoses are good in what they cover; however, it is surprising that there is not a section on poisonings in general and their management. The section on endocrine problems is useful, with attention being given to the various types of coma associated with diabetes, as well as a brief discussion on some of the less commonly encountered endocrine emergencies, such as hypo- and hyperparathyroidism, Addisonian crisis, etc. Other less commonly seen emergencies that are discussed include the crisis of myasthenia gravis and hypothermia; in the latter, treatment is not dealt with at all effectively, and one is left using a trial-and-error approach.

An interesting aspect of the medical education system is that frequently the most acutely ill patients received in the emergency room are initially seen by junior personnel with little of the diagnostic experience their more senior colleagues might have. This book has been offered as a means of filling in that lack of experience. However, it could best be used as a rapid reference to exclude major entities or as a source for reviewing the salient points of treatment once a diagnosis is made. One would certainly expect any newly qualified physician entering the emergency room to have a more detailed knowledge than is presented here of most of the topics discussed. This book could perhaps best be used by medical students entering their clinical training, as a preview to the management of medical emergencies.

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**Applied Physiology of Respiratory Care.** By J. HEDLEY-WHYTE, G. E. BURGESS, T. W. FEELEY AND M. G. MILLER. Boston, Little, Brown & Co., 1976. Pages: 552. Price: \$22.50.

This textbook is directed to "physicians and other hospital personnel who care for critically ill patients" and is presented as a "source of information of board examination candidates in the medical and surgical specialties, including respiratory therapy." The book is well-organized, well-written and includes an extensive bibliography. The first 11 chapters are concerned with the general management of respiratory failure, and the remaining 20 chapters present respiratory management of specific conditions such as organ failure, trauma, and drowning.

It may well be that the objectives are too broad to be attainable, for the authors fail to achieve their stated purposes, primarily because of inadequate physiologic and pathophysiologic detail. For example, they state that intermittent positive-pressure breathing "rarely causes hypotension" since it is compensated for by an increase in peripheral vascular resistance. This is largely true for patients who can increase their vascular resistance, but no mention is made of those patients who have limited or no ability to compensate, *i.e.*, the high cervical cord transection, the anesthetized patient, or the patient receiving peripheral dilating agents who may require mechanical ventilation, frequently continuous positive-pressure breathing. Normovolemic hypotension during continuous positive-pressure breathing is a complex clinical problem, and the authors meet it by stating that since volume expansion can be hazardous they "prefer to use dopamine to manage hypotension in normovolemic patients on CPPV," an obviously interesting approach made even more so by the absence of qualifying remarks, discussion, or bibliography.

When preparing for board examinations, the candidate is researching and reviewing the "why" and "how" of his particular specialty. This text does not provide in-depth, complete answers to these questions. For example, "Since total respiratory compliance is simple to measure in patients receiving controlled ventilation, it should be monitored during the application of positive end-expiratory pressure to determine the optimal level of cardiopulmonary function during CPPV." A short discussion of *how* it is measured and its correlation with optimal cardiopulmonary function would appear to be in order. Similarly, a statement such as "increases in inspiratory flow rate above 25 liters per minute produce a marked increase in deadspace-to-tidal volume ratio, which can lead to alveolar hypoventilation if no changes in the rate or tidal volume of the ventilator are made" requires further explanation to insure the reader's understanding.

The authors feel that since personal experience is highly important, bias is unavoidable. This attitude tends to mislead the board candidate when opposing viewpoints are not presented. For instance, a declaration that in the anesthetized patient "the degree of atelectasis that occurs can be minimized by ventilation with large tidal volumes" ignores the controversy over this concept, and no remarks qualify the influence of ventilatory pattern on shunting or atelectasis.

An interesting concept that positive end-expiratory pressure reduces alveolar macrophage function, thereby increasing the risk of pulmonary infection, is presented without elaboration or literature reference.

Nitroprusside is said to be of benefit in patients in endotoxic shock. The statement is documented, but greater detail would better serve the board candidate and the clinician. Space limitation is an important consideration, but several long case reports do appear throughout the text, perhaps at the expense of more valuable detail.

In the section, "Respiratory Consequences of Specific Surgical Problems," it is stated that no tachyphylaxis develops in response to sodium nitroprusside. This is erroneous. Sensitive patients