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Book Reviews

Anesthesia for Neurological Surgery. By P. B. McCOMISH AND P. O. BODLEY. Chicago, Year Book Medical Publisher, 1971. 412 pp., 93 figures. Price: $19.00.

Texts directed toward clinical practice in anesthesia subspecialty areas have a twofold mission. First, they must provide a current synopsis of the state of the art and science within the specialized clinical discipline under consideration. The second goal is the transmission of practical information concerning anesthetic and surgical techniques peculiar to the subspecialty. This should enable the occasional practitioner in that specialty area to benefit from the author's extensive experience. Recognizing the first requirement, the authors have devoted a section of their textbook to "Fundamental Concepts of the Intracranial Milieu." This section should provide a ready reference source for understanding recent advances in cerebral circulatory physiology and pharmacology in normal and diseased brain. Unfortunately, a book published in 1971, with its latest reference drawn from 1969, cannot succeed in giving the *circa* 1975 reader what he needs. Compounding this deficiency is an incomplete and often uncritical presentation of the scientific and clinical information available when this book was written. For instance, the effect of hydrogen ion concentration on cerebrovascular resistance is relegated to a footnote, and the authors thereby avoid a presentation of controversial data concerning the relative influences of chemical, neurogenic, and myogenic factors on the cerebral circulation.

Because of the time lag between writing and review of this text, it was difficult for me to evaluate closely the authors' scientific intuition in interpreting the literature available to them. However, the data presented by them describing the percentage distribution of the intracranial compartments is inaccurate and drawn from a secondary reference source. Also, the notion that ventilation with 100 per cent oxygen will attenuate episodic increases in intracranial pressure remains unproven, and the authors do not point this out. They present information indicating the deleterious effect of negative-phase respirator cycling on pulmonary function and then later suggest that it be employed to reduce venous bleeding during spinal surgery. Their suggestion that acute adrenal insufficiency and water intoxication following pituitary surgery should be treated with steroids misses the important point that water restriction is required for the latter condition. The idea that cerebrospinal fluid acid–base status in head-injured patients is a better measure of ventilatory sufficiency than arterial blood-gas measurements does not make sense, and probably is a misinterpretation of the intent of the primary reference source.

The section on anesthetic pharmacology is badly outdated. It does not recognize the intracranial pressure-elevating potential of ketamine or *d*-tubocurarine. This is dangerous, since the authors suggest that ketamine be used for neurodiagnostic procedures. The ability of volatile anesthetic agents to alter cerebral blood flow autoregulation without change in blood pressure is not mentioned. Nor are the altered autoregulatory threshold changes associated with cardiovascular hypertensive disease discussed. The discussion of cerebral edema is restricted and eludes presentation of important insights into blood–brain barrier structure and function. Considering the British experience with sodium nitroprusside in elective hypotension for neurovascular surgery, it is surprisng that it is not even referred to in passing.

The last two sections of this work address themselves to the second goal of a subspecialty text. The third section of the book deals with basic techniques in neuroanesthesia. It is somewhat redundant in that it deals with material belonging to the preceding section on basic concepts or with that adequately covered in the following section. The last section, which covers specific neuroanesthetic problems, is the strongest point of the book. In this section the book shines in its presentation of the more classic problems relating to anesthetizing and caring for patients with intracranial or spinal disease. The chapters dealing with specific lesions and procedures provide a ready reference source for the trainee and practicing anesthesiologist. Sections dealing with more rarely performed procedures are terse and complete. The chapter concerned with monitoring requires amplification on the practical aspects of intracranial pressure measurement, and the coverage of thermometry is incomplete, although this oversight is remedied in a subsequent discussion of hypothermia. The neurovascular chapter is lacking in its handling of monitoring requirements for carotid artery surgery. The important interrelationships among regional cerebral blood flow, the electroencephalogram, and carotid artery stump pressures are neglected. These minor deficiencies aside, the authors have achieved their goal of providing a practical instructional guide to neuroanesthetic practice in the 12 chapters in this section.

The introductory chapter presents an interesting overview of the development of neurosurgical anesthesia, and the authors preface each chapter with similar historical notes. Items discussed early in the text are often repeated in greater detail later in the book. However, this is not indicated within the text, and the uninformed reader might cease his study before realizing his objectives. The radiographs presented would more clearly illustrate their point if arrows had been used to demonstrate the

areas of interest, and a number of the reproductions are of poor quality. On the other hand, the pictures of patients positioned for various procedures provide clear illustrations of the problems the anesthesiologist and his patient are about to face.

Evaluation of the text in view of information currently available in a number of recent review articles indicates its functional inadequacy in this area. However, no current text devoted to neuroanesthesia is presently available, although recent publishers' advance notices indicate that at least two books are about to be published. A combination of a number of review articles on cerebrovascular physiology and pharmacology and McComish and Bodley's text would provide a suitable reference source for neuroanesthetic practice until the newer offerings can be evaluated.

The purchaser of this book receives a practical cookbook to neurosurgical anesthesia and little additional food for thought. Considering that a stated goal of the book is to improve the anesthesiologist's comprehension and enjoyment of neuroanesthesia, the skimpiness of the basic concept chapters will do much to undermine his confidence when he interacts with his, hopefully, more up-to-date neurosurgical colleagues. There is no one-stop shopping here!

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Note: The above book was received several years after its publication. Review was deemed justified because there is no comparable text currently in print.—B.R.F.

IRCS Journal of Medical Science. University Park Press, Baltimore, Maryland 21202, 1975. Annual subscription $77.00.

"The International Research Communications System (IRCS) exists to provide scientists with a medium for the immediate publication of original research results in all areas of biomedical research." Communications are limited to 500 words, five references, and such tables and illustrations as can be included in a single page of print. The reports are reviewed and published within an average of four weeks in one of the IRCS Specialist Journals. The IRCS Journal of Medical Science, a monthly, reprints about 20 reports selected for their general interest, as well as a complete list of all articles in those journals. This interesting experiment in communication could be useful to young workers in a hurry afraid of being scooped (the urgency is not apparent in all cases). Whether the journal will appeal to mature scientists who like to evaluate the quality of what they read is more problematic. The publishers say this is a new way to keep up-to-date; they do not say it is a better one.—*B.R.F.*

Public Health Aspects of Critical Care Medicine and Anesthesiology. EDITED BY PETER SAFAR. Philadelphia, F. A. Davis Co., 1974. 396 pp. Price: $20.00.

> The purpose of this book is to encourage and assist physicians and other personnel to extend their roles beyond those of treating individual patients to health maintenance, medical care delivery, and the discovery and implementation of possible solutions to the society's problems in critical care medicine (resuscitation, emergency medical care, and intensive care).

These goals are admirably met by the authors. Dr. Safar begins with a well organized, thoughtful analysis of what is right and wrong with medical care, particularly as it relates to emergency medical services. He discusses the position of emergency medical services and critical care medicine from a global perspective and then goes on to review the national health care industry. For those accountable to the Joint Commission on Accreditation of Hospitals, a chapter contributed by that organization discusses the development, function, and standards for anesthesia services and special care units.

The achievements and failures of emergency and critical care medicine in Allegheny County, Pennsylvania, from the street ambulance to the operating room and intensive care unit, are carefully defined and illustrated. Guidelines for staffing, organizing, physical standards and leadership are presented, along with an extensive bibliography for further education. Dr. Safar has long promulgated that knowledge of cardiopulmonary resuscitation requires a broad base at many levels of the community. Accordingly, a teaching program for cardiopulmonary resuscitation, structured for varying degrees of expertise, is included.

Dr. John Bunker considers the problem of surgical workloads from several viewpoints, and regards anesthetic mortality as a public health hazard, in keeping with the "public health" aspect of the book. An engrossing chapter on the delivery of anesthesia services outside of the United States and Canada follows. The economic implications of providing even basic anesthesia to the underdeveloped countries of the world are enormous. Sensible recommendations are offered for a non-sensible world where, for example, the quality of medical care offered at the Hadassah Hospital in Jerusalem, Israel, cannot be shared with some nearby populations. As Dr. Safar states:

> Efforts to prevent premature death and to reduce pain and suffering have been a farce throughout history, when national and political leaders have forced young people to kill and die in wars, while physicians at home have labored to keep alive non-salvageable patients or have treated essentially healthy persons.

Several excellent short chapters discuss anesthesiology in relation to inhalation therapists, nurse anesthetists, dental anesthesia, allied health personnel, obstetrical anesthesia, outpatient anesthesia, and departmental and individual financing. One suggestion that disturbs the reviewer involves a comparison between the need for critical care physi-