

## REVIEWS OF EDUCATIONAL MATERIAL

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**Introduction to Anesthesia, Ninth Edition.** By Dripps, Eckenhoff, Vandam. Edited by David E. Longnecker and Frank L. Murphy. Philadelphia, W.B. Saunders, 1996. Pages: 528. Price: \$47.50.

I became familiar with the fourth edition of this text during my residency in anesthesiology and purchased the fifth edition shortly after completing my residency. Both texts were easy to read, reasonable in price, and contained a wealth of information for the novice or newly educated anesthesia care provider, although my fifth edition has markedly fewer underlined passages than does the fourth, and it is less worn. The ninth edition retains the above qualities of the preceding issues. The text has undergone a degree of evolution over the years, especially in the addition of new chapters, as our knowledge base and emphasis change. Previous editions used a number of authors from institutions outside of Philadelphia, Pennsylvania, compared with the ninth edition, wherein only 4 of 43 authors are from outside of Philadelphia. This is a mere observation and does not appear to affect the quality of this textbook. These 43 authors have contributed 38 chapters divided into 7 sections. These sections will be discussed individually.

Section I is a brief overview of the evolution of the specialty and the progress that has been made. In Section II, there are five chapters dealing with preoperative evaluation, premedication, monitoring, blood gas interpretation, and the anesthesia machine. The chapter on blood gas analysis and interpretation mentions the concept of anion gap but offers no definition or explanation. There is no discussion of hydrogen ion concentration. Three cases are presented to illustrate acid-base abnormalities, which is helpful in understanding the etiology of the abnormality of the acid-base data. This reader would have appreciated an expansion of sections dealing with latex allergy and treatment of hypertension in Chapter 4. It is probably a sign of the times that pediatric breathing circuit discussion is limited to the Mapleson D circuit or the Bain modification, as is the case in Chapter 5. A discussion of gas laws as they apply to the anesthesia machine is omitted. Chapter 6 has a somewhat limited discussion of pulmonary artery catheters and transesophageal echocardiography in view of our current usage, knowledge, and controversy.

Section III discusses drugs used in anesthesia. Chapter 7 presents a concise and easily understandable discussion of pharmacologic principles and their importance to the anesthesiologist. Chapter 8 deals with the inhaled anesthetics and presents useful data and graphics comparing their properties and effects. Sevoflurane and desflurane are more than adequately compared with the older inhalation anesthetics. Chapters 9 and 10 deal with intravenous agents. The information presented is somewhat more limited, and there is no mention of remifentanyl or nalmeferene. The reader is cautioned to recall that ketamine is a direct myocardial depressant and that during anesthesia or in trauma patients ketamine may result in a paradoxical decrease in blood pressure. The chapters on muscle relaxants and medical gases are concise and informative.

Section IV reviews the conduct of the anesthetic. The chapter concerning airway management contains a number of useful and informative tables and algorithms. Although the chapter addressing fluids and blood loss also contains a number of useful and concise information in tabular form, a discussion of the use of aprotinin or

the thromboelastogram is lacking, and the latest reference is 1988. The chapter regarding patient positioning is very practical.

Section V is confined to discussions of regional anesthesia and local anesthetic pharmacology. Although the chapter on nerve blocks contains excellent diagrams of the anatomy of the various areas in which the block needle is to be placed, this reader believes that sensory distribution of the nerves being anesthetized would have been of value.

Section VI addresses special patient conditions or situations. The chapter on cardiopulmonary resuscitation is exceptional and contains a number of tables and algorithms, which are useful to the anesthesia provider, regardless of their level of experience. The chapter concerning respiratory disease and evaluation is equally informative and well written. The chapter on cardiovascular disease may have benefited from a discussion of valve areas and pressure volume loops. The chapter dealing with hepatic and renal disease provides little information concerning renal protection measures and does not delineate the tests necessary to differentiate between the types of liver dysfunction or postrenal, prerenal *versus* renal impairment. The chapter on obstetric anesthesia does not appear to discuss the HELLP syndrome nor does the text mention subarachnoid anesthesia provided by meperidine (a unique property). This reader believes that the milligram doses of subarachnoid fentanyl and sufentanil, given on page 356, were intended to be microgram doses. With the increasing age of the population, the geriatric anesthesia chapter is timely and informative. In contrast, the outpatient anesthesia chapter is fairly limited in scope, does not discuss hard copy discharge criteria such as Digit Symbol Substitution, and, probably as a result of the timing of publication, does not cover remifentanyl, which may be particularly suited to outpatient anesthesia. The chapter on neuroanesthesia provides a limited discussion of CNS monitoring or CNS protection (NMDA channels, glutamate, etc.), and the discussion of carotid endarterectomy is also somewhat limited.

The final section deals with PACU, ICU, pain management, mishaps, and medicolegal issues. The reader is cautioned to be on the watch for the rare misprint, such as that on page 437, where a dose of 40–80 mg of naloxone is recommended. With the current emphasis on pain management, the chapters addressing acute and chronic pain management are both useful. In the chapter concerning anesthesia mishaps, the issue of pacemakers is briefly covered, but the potential problems associated with automatic internal cardiac defibrillators is not. The final chapter addresses the continuum of the educational process of the anesthesia practitioner and essentially places the current text at the beginning of that process.

This text is consistent with preceding editions in that the bibliography for each chapter, although being fairly current, is also fairly limited. Additionally, individual references are not given for statements in the text, making it somewhat more difficult to pull the original source material for review.

In the preface, Drs. Longnecker and Murphy assert that the ninth edition, unlike the previous editions, which were “. . . a concise source of current practice for those entering the specialty.”, was to also fill the need of those “. . . as they prepare for the qualifying examinations or the management of a specific patient.” As the editors indicate, the ninth edition does not cover cardiac surgery, neonatal surgery, organ transplantation, or surgery involving the thoracic aorta



to any degree. Although the text is an excellent source of information for the medical student or anesthesia resident beginning his or her education, this text would appear to fall short of the mark as a resource text for the management of more complex anesthetic procedures or as the sole source reference when preparing for qualifying examinations. Despite these apparent limitations, this text is an excellent value for novices to anesthesia or those early in their anesthesia residency. This reader surely referred to his earlier edition often during his residency.

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**Textbook of Neuroanesthesia with Neurosurgical and Neuroscience Perspectives.** Edited by Maurice S. Albin. New York, McGraw-Hill. Pages: 1433. Price: \$165.00.

This is a multiple-authored text edited by a well-known neuroanesthesiologist, Maurice S. Albin, M.D. It is considerably longer than other textbooks in this field and features an eclectic mix of authors. (Slightly fewer than half the authors are neurologists, neurosurgeons, and radiologists.) In addition, it covers many topics not often addressed in anesthesiology textbooks. Whereas other books have separated basic principles of neuroanesthesia from clinical sections, this one is considerably more integrated. Some chapters cover basic physiologic or pharmacologic principles in a given area and the status of basic and clinical research in that area, and then integrate that information into recommendations for clinical care. Other chapters deal primarily with either basic principles, such as separate chapters on chemical neurotransmission, excitotoxicity, and resuscitation of the ischemic brain, or they are clinically oriented, such as chapters on neurologic syndromes and anesthetic implications or on carotid artery disease. There are several topics covered that are not usually included in classic anesthesiology texts, such as chapters on neurobehavioral evaluation, differential diagnosis and causes of coma, and the diagnosis and management of epilepsy. These are useful to anesthesiologists caring for patients with neurologic diseases.

Several chapters are good references for residents, neuroanesthesiology trainees, and practitioners providing care for neurosurgical patients. The chapter on evoked potential monitoring by Tod Sloan, M.D., provides a well-organized, logical, and thorough review of evoked potential monitoring that covers the theory and technical aspects of recording plus indications for monitoring and effects of physiologic changes and anesthetic agents. It is an ideal source for anesthesiologists interested in learning about evoked potential monitoring. A similarly designed chapter by Ira Rampil, M.D., is a valuable review of electroencephalographic monitoring, its techniques, clinical

indications, and clinical impact. The two chapters on neurologic syndromes and neuromuscular diseases are succinct and thorough reviews that would interest all anesthesiologists. Each is a well-written and well-organized review of these uncommon diseases and their anesthetic implications. The chapter entitled Effects of Anesthetic Agents and Temperature on the Injured Brain, by David S. Warner, M.D., provides a clear and thorough review of recent research on cerebral effects of these agents. It covers material addressed in several other chapters in the book but provides the best discussion of this area.

The second half of the book consists primarily of chapters that address specific clinical conditions or procedures. In general these chapters are well-written, complete reviews of each disease process, its diagnosis, treatment options, and surgical and anesthetic management. Some chapters provide considerably more information regarding diagnosis and surgical management than anesthetic management, such as chapters on supratentorial tumor surgery and spine procedures. Others, such as chapters on posterior fossa surgery, carotid endarterectomy, and aneurysms, are directed more toward anesthetic issues. The neuroradiology chapter provides a great deal of information about each radiologic technique that would interest those anesthesiologists participating in anesthetizing patients for these procedures, even though there are relatively few pages directed toward anesthetic management. The chapter by William L. Young, M.D., on interventional neuroradiology is also a useful review of both radiologic and anesthetic techniques and problems.

Some chapters give recommendations regarding clinical care that may not be the practice of many neuroanesthesiologists, such as a suggestion for spontaneous ventilation during clipping of posterior circulation aneurysms as a way to monitor brain stem integrity. In the chapter entitled Resuscitation of the Ischemic Brain, recommendations for clinical care are made based on animal data only. This is of concern, considering the long list of treatments for cerebral protection with promising results in animal models and no protection demonstrated in the clinical arena. There are many areas of overlap and duplication from one chapter to another. In his introduction, Dr. Albin recognizes this, but he also notes that this is necessary if each chapter is to deal with its subject matter completely. In a text of this nature, this is not a drawback.

This book will serve as a reference tool to practicing anesthesiologists caring for patients with neurologic diseases by providing information not only on their anesthetic care but general information about neurologic disease. For the experienced neuroanesthesiologist, it is a valuable resource for information about diagnosis and treatment of less common conditions and about neurosurgical and neuroradiologic procedures. It is more extensive than the average anesthesia resident would need who is rotating through the neuroanesthesiology service.

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