

## BOOK REVIEWS

Edward Lowenstein, M.D., Editor

**The Neuromuscular Junction.** BY R. A. BRUMBACK, J. GERST. Futura Publishing Company, Mt. Kisco, 1984. Pages: 354. Price: \$39.00.

Much of our basic knowledge of drug development, drug interaction at the neuromuscular junction (NMJ), and patient care of many diseases affecting the neuromuscular apparatus is due to advanced research in structural morphology, neurophysiology, neurochemistry, immunology, and pharmacology of the NMJ. This book, which is a multiauthored contribution consisting of seven chapters, reviews some of these developments.

The first chapter reviews the historic development of the concepts of neuromuscular transmission. The structure and morphogenesis of the NMJ are illustrated in the second chapter with impressive light and electron microscope studies. Physiology and molecular basis of the function of NMJ, the postsynaptic receptor, and the presynaptic transmitter release system are discussed chapter 3. Chapter 4 clearly addresses the clinical pharmacology of the NMJ: sites of action of drugs (postjunctional and/or prejunctional) and the effects of pharmacologic agents on the membrane ion channels and other parts of the NMJ. Disturbances in muscle membrane, synapse, and nerve terminal following injury to the motor nerve are discussed in chapter 5. Chapter 6 is devoted to the immunopathologic disturbance, evaluation, and treatment of patients afflicted with myasthenia gravis. The last chapter provides the reader with a summary of other pathologic neuromuscular disorders and drug interactions at the NMJ.

On the whole, the volume presents a useful compilation of some of the advances reported in recent years on the neuromuscular junction. It provides a rich source of information and literature for those interested in the field of neuromuscular function and, in particular, in pathologic problems involving the neuromuscular junction.

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**Pediatric Anesthesia.** EDITED BY GEORGE A. GREGORY. New York, Churchill Livingstone, 1983. Pages: 1,020. Price: \$98.00.

The goals of Dr. Gregory for this textbook, as stated in the Preface, are to provide in one place the information currently needed to effect a physiologic and pharmacologic approach to anesthesia for infants and children, including the clinical information and technical details necessary to care for the patient. This most ambitious purpose,

for the most part, has been achieved by the Editor and his collaborators.

The text consists of two volumes, the first devoted primarily to basic sciences as they apply to pediatric anesthesia (and to neonatal and pediatric critical care as well). The second volume deals with special techniques and settings (outpatient anesthesia and intensive care), and with anesthesia for operative procedures grouped by anatomic site or by subspecialty. This organizational framework permits much more depth in the basic unique strengths of this book, yet results in the redundancy and lack of integration that constitutes one of the several deficiencies that detract from the book's overall excellence.

With only two exceptions, the authors would be recognized by most of us as authorities on the topics they address. Eight authors, including the Editor, are directors of pediatric anesthesia in major children's hospitals or university hospital medical centers and have 10 or more years postresidency experience. Thus, the text speaks with authority and the voice of practical experience in most chapters. Style and clarity vary, as seems inevitable in multiauthored books, but the majority of chapters appear to be clear and appropriately focused, and several are outstanding. A high level of scholarship with an abundance of references to current literature as well as older landmark articles characterizes many chapters, whereas a few chapters, such as the opening one on Outcome of Pediatric Anesthesia and the sections on deliberate hypotension and hypothermia in Special Techniques were disappointing in this regard. The latter topics, however, were well covered in other chapters.

In my opinion, several problems should be addressed in the second edition of this book, which I assume will be forthcoming in the next few years. The most vexing of these is the frequent lack of integration of information and cross-referencing between chapters dealing with overlapping topics. For example, fluid balance and intravenous fluid administration are discussed extensively (12 pages) in the chapter Developmental Metabolism and Nutrition, again in some detail in The Renal System, and once more in Maintenance of Anesthesia, yet no cross-references to the other chapters occur. Similar redundancy occurs with several other chapters and subjects, such as the lists, tables, and text citations of age-normal cardiopulmonary variables. The reader would benefit considerably from a chapter dedicated to fluid balance and intravenous fluid therapy, which would serve as the basis for discussion of specific fluid management issues and could be cross-referenced in other chapters. Likewise, inclusion of tables of age-normal physiologic variables, usual recommended drug dosages, and other pertinent data in an appendix could provide a quick reference source, as well as norms to which the various collaborating authors could refer.

Another matter of concern in some basic science chapters is the occasional lack of focus on the relationship of the material to pediatric anesthesia. This seems particularly true in the otherwise very informative and well-written chapters on The Central Nervous System and Developmental Metabolism and Nutrition. In the former chapter no attempt has been made to relate 38 pages of material to the practice of pediatric anesthesia; in the latter chapter those matters relevant to the perioperative care of infants and children, such as the excellent summary of glucose homeostasis in the newborn,