

BOOKS AND MULTIMEDIA OF INTEREST



Clinical Guide of Pediatric Anesthesia, edited

by Karen Zaglaniczny, CRNA, PhD, and John Aker, CRNA, MS. 503 pages including appendices and index, \$44.95. Philadelphia, Pa: W.B. Saunders. 1999.

The provision of pediatric anesthesia can be exhilarating one minute and horrifying the next. Few of us can recall last week's or last month's pediatric anesthetic case-load with exactitude, but should one of those cases go awry, the experience is permanently imprinted on us. Fortunately we have a tool empowering us with a broad knowledge base for the provision of pediatric anesthesia, enabling us to avoid anxious and uncertain moments during care.

The *Clinical Guide to Pediatric Anesthesia* is a compilation of works by 27 PhDs, physicians, nurse anesthetists, and other advanced practicing nurses. The authors come from wide variety of geographic regions as well as a broad base of pediatric knowledge and experience. The cooperative work effort consists of 26 chapters, 3 appendices, and an index. The chapters as well as the appendices are presented in outline format with sidebar boxes consisting of illustrations or tables that include references at the conclusion of each. The entire text, appendices, and index have been condensed to a 503-page, 5x8-inch paperback book.

The first section consists of 2 chapters relating the differing anatomy and physiology that a child exhibits throughout development and the considerations that these early physiologic

changes have on the pharmacodynamics and pharmacokinetics of relevant drugs. This section presents what can be viewed as changes in growth and development in a child with "normal" physiology. It includes nomograms of average height and weight. An overview of all the major organ systems and the differences presented by the pediatric population with respect to each is presented; the emphasis is upon age-specific pharmacokinetics and pharmacodynamics.

In the second section, chapters 3 to 7 focus upon the aspects of anesthetic preparation of the patient. Beginning with a how-to of accurate preoperative assessment and physical examination, it highlights circumstances warranting special consideration. Age-relevant care and caution comes in the form of specific additions or highlights in physical examination or extra laboratory testing required for a specific pediatric illness. Detail is provided with regard to airway equipment and monitoring the pediatric patient during an anesthetic. Approaches for determining the correct selection of all equipment are spelled out; charts facilitate presentation and understanding. National standards for monitoring are provided.

Section 3, chapters 8 through 14, contains 114 pages detailing the principals of the most common pediatric surgical procedures. The section begins with ear, nose, and throat surgery, followed by general surgery, orthopedic surgery, neurosurgery, cardiovascular surgery, urology, and diagnostic procedures commonly necessitating the provision of

anesthesia. In each case, the surgical procedure to be performed by the various subspecialties is described as well as its rationale. These chapters highlight the anesthetic consideration relevant to each surgical procedure. Topics such as positioning (eg, sharing the airway), invasiveness of the procedure (eg, blood loss and fluid shifts) and potential anesthetic approaches are detailed.

Sections 4 and 5 focus upon conditions common and uncommon to the pediatric population, ranging from the common cold to muscular dystrophy. For each of these illnesses, the etiology and clinical manifestations, as well as preoperative, interoperative, and postoperative management suggestions and recommendations, are made. Malignant hyperthermia, burns, trauma, and latex allergy in the pediatric patient are the rare yet severe special conditions presented in the final 4 chapters of this section.

The chapter on pediatric regional anesthesia begins section 6. This chapter includes excellent photos and diagrams to illustrate correct regional technique for the pediatric patient. Chapter 25 addresses the specific needs and goals for the child in the postanesthesia care unit, as well as after discharge. Chapter 26 details anesthetic adjustments related specifically to the neonatal surgical patient. Clinically relevant neonatal physiology and pathophysiology and anesthetic recommendations are provided.

The text concludes with the three appendices and the index. Appendix A is an general overview of some relevant considerations

(eg, drug doses, equipment sizes, physiologic parameters) in an anesthetic plan based upon weight. Appendix B is an alphabetized, relevant formulary. Appendix C is an overview of resuscitation guidelines.

First impressions are sometimes difficult to shed. My initial impression as I read the first 2 sections was that this text was intended for student due to the basic and lackluster format; this quickly gave way to the sense that this “no nonsense” approach made the text easy to read and even easier to use as a pocket reference in the operating room.

This book should be used by the anesthesia provider in the operating room every day. It is easy to read, highly detailed, easily referenced, yet compact enough to render it convenient for everyday clinical use. Take the pain out of pediatrics from now on by getting yourself a copy.

Corry A. Coopmans, CRNA, MS

*Piedmont Anesthesia Associates
Richmond, Virginia*



Foundations of Anesthesia: Basic and Clinical Science, edited by

Hugh C. Hemmings Jr, BS, MD, PhD, and Philip M. Hopkins, MB, BS, MD, FRCA. 748 pages including index, \$145. London, England: Harcourt Publishers Limited. 2000.

This edited text is a transatlantic collection of 70 chapters focusing on the underlying scientific principles of clinical anesthesia practice. The editors, Hugh C. Hemmings, Jr, BS, MD, PhD, Cornell University, and Philip M. Hopkins, MB, BS, MD, FRCA, University of Leeds, chose “cutting edge” expert physicians from North America and the United Kingdom to author each chapter based on their area of

expertise. Divided into 8 sections, including General Principles, Neurosciences, the Cardiovascular System, the Respiratory System, Pathological Sciences, the Renal System, the Gastrointestinal System and Metabolism, and Adaptive Physiology, each chapter covers basic science information and its application to clinical practice.

The table of contents provides title headings for each section and chapter. A list of topics to be covered can be found at the beginning and key references and recommendations for further reading at the conclusion of each chapter. A single appendix briefly discusses medical resources on the Internet. The detailed index is 18 pages long, allowing the reader to easily locate subjects of interest.

The first section covers molecular and cell biology, pharmacokinetics, and physics, incorporating practical and/or technical applications to anesthesia practice. Sections 2 through 7 focus on specific organ systems, with thorough explanations of underlying scientific principles and key concepts related to anesthetic management. Section 8 concludes with an in-depth look at special populations and conditions, including pregnancy, geriatrics, neonatology, obesity, trauma, and sepsis.

Chapter layout is not standardized, each containing varying degrees of reference to anesthetic practice depending on the topic. Some are devoted almost exclusively to basic scientific principles, such as Cell Structure and Function, Sites of Drug Action, The Synapse, and Gut Motility and Secretions. Others include a paragraph at the end summarizing the topic's relevance and application to anesthesia practice (Molecular Physiology, Cell Signaling, Electroencephalography, Electro-

myography and Evoked Potentials, Renal Physiology). The remainder incorporate application to anesthesia practice throughout the entire chapter. The chapter titled “Statistics” bears special mentioning. While it is informative, it lacks the organization typical of the rest of the text as the authors also tried to include information regarding research design and methodology instead of focusing specifically on statistical analysis. Unfortunately it is difficult to discuss one without the other(s), 1 chapter being inadequate to do them all justice.

A clear strength of this book is the generous use of tables and illustrations. While writing style varies with each chapter, the figures (all 695) follow a clear, standardized presentation. This, in combination with a brief but thorough description, allows each figure to stand by itself while serving as an excellent adjunct to the text.

The editors state their goal to avoid repetition, one they appear to have achieved. Organization of the text is logical with smooth transition between chapters. This reviewer is curious as to the decision only to include key references instead of a full reference list. One other minor limitation is that only the neonatal period of pediatrics receives attention. However, these do little to detract from the overall value of this worthwhile effort. This concept-oriented learning aid is a must-have for all students and educators of anesthesia. Practicing anesthesia providers should seriously consider replacing their outdated basic and clinical science texts with this excellent reference tool.

Vicki C. Coopmans, CRNA, MS

*Doctoral student, School of Allied Health
Virginia Commonwealth University
Richmond, Virginia*