

Mark A. Warner, M.D., Editor

Handbook for Stoelting's Anesthesia and Co-Existing Disease, 3rd Edition. Edited by Roberta L. Hines, M.D., and Katherine E. Marschall, M.D. Philadelphia, Saunders Elsevier, 2009. Pages: 510. Price: \$54.95.

This handbook accompanies the fifth edition of *Stoelting's Anesthesia and Co-Existing Disease*, containing the same topics and chapters as the main textbook. This format makes it easy to reference the textbook for more detailed information, while the handbook provides a concise, portable reference that is easy to use in the operating room. Written by 28 expert authors, the book is divided by organ system into 25 chapters.

Chapters 1–8 discuss ischemic heart disease, valvular heart disease, congenital heart disease, abnormalities of cardiac conduction and cardiac rhythm, systemic and pulmonary arterial hypertension, heart failure and cardiomyopathies, pericardial diseases and cardiac trauma, and vascular diseases. Major anesthetic considerations and hemodynamic goals are presented for patients with ischemic heart disease, stenotic and regurgitant valvular lesions, congenital heart disease, and rhythm abnormalities. A wide variety of vascular diseases, from abdominal aortic aneurysms to Takayasu's arteritis, Wegener's granulomatosis, and polyarteritis nodosa, are reviewed with several helpful tables that present signs, symptoms, and anesthetic considerations of these conditions.

The chapter on respiratory diseases, Chapter 9, includes helpful figures, such as both normal and abnormal spirometry and flow-volume curves, along with a review of the diagnostic and therapeutic considerations for both obstructive and restrictive lung diseases. Modes of mechanical ventilation and techniques for weaning from the ventilator are described in a concise, easy-to-read manner.

Chapter 10 is divided into three parts: diseases affecting the brain, spinal cord disorders, and diseases of the autonomic and peripheral nervous systems. Increased intracranial pressure, brain tumors, coma, brain death, cerebrovascular diseases, traumatic brain injury, and seizure disorders are discussed with a focus on anesthetic management. A section devoted to spinal cord disorders provides guidelines to the management of both acute and chronic spinal cord injury, including a section on autonomic hyperreflexia. Finally, autonomic disorders and peripheral neuropathies are discussed.

Chapters 11–22 are devoted to diseases of the liver and biliary tract; diseases of the gastrointestinal system; nutritional diseases and inborn errors of metabolism; renal diseases; fluid, electrolyte, and acid-base disorders; endocrine diseases; hematologic disorders; skin and musculoskeletal diseases; infectious diseases; cancer; diseases related to immune system dysfunction; and psychiatric diseases/substance abuse/drug overdose. Each chapter describes the most common diseases in each of these systems, along with their anesthetic considerations.

Chapter 23 discusses care of the obstetric patient, including the normal physiologic changes associated with pregnancy and options for obstetric anesthesia care. Complications, such as preeclampsia and obstetric hemorrhage, are reviewed, along with considerations for obstetric patients with coexisting medical diseases. Fetal assessment and common neonatal problems are discussed briefly.

Chapter 24 provides a relatively thorough review of pediatric anesthesiology with topics such as the physiologic differences between children and adults, guidelines for intraoperative fluid management and acceptable blood loss, and pharmacologic considerations in pediatric patients. Neonatal conditions, including respiratory distress syndrome, retinopathy of prematurity, congenital diaphragmatic hernia, tracheoesophageal fistula, omphalocele/gastroschisis, and pyloric stenosis, are reviewed with a focus on anesthetic management. Pediatric surgical conditions such as posterior fossa tumors, craniosynostosis, cleft lip/palate, mediastinal masses, and burn injuries are also discussed. In addition, there is an excellent review of malignant hyperthermia and masseter muscle rigidity, which incorporates several concise, easy-to-reference tables.

The final chapter of the handbook discusses geriatric disorders, with a helpful table describing the effects of aging on each organ system. Considerations for patients with both dementia and delirium are reviewed, as are ethical challenges in geriatric anesthesia.

Overall, this handbook is a compact, portable reference for questions and conditions most commonly encountered in anesthesia. One especially helpful feature of the book is the multitude of tables that present critical information in a concise format. These succinct tables quickly provide the anesthesiologist with the most important perioperative concerns and goals for patients with a wide variety of conditions. The handbook has been revised with current information, such as the recently updated guidelines for endocarditis prophylaxis. As a concise, easy-to-read handbook, this text is a valuable tool for experienced anesthesiologists, fellows, and residents to use in the operating room and preoperative clinic.

Christine A. Kenyon, M.D., Mayo Clinic, Rochester, Minnesota.
kenyon.christine2@mayo.edu

(Accepted for publication July 2, 2009.)

Stewart's Textbook of Acid-Base. Edited by John A. Kellum, M.D., and Paul W. G. Elbers, M.D. London, United Kingdom, Lulu Enterprises, UK Ltd., 2009. Pages: 504. Price: \$88.13.

Stewart's Textbook of Acid-Base edited by John Kellum, M.D. and Paul Elbers, M.D., consists of a reprint from Dr. Peter Stewart's original text in 1981, *How to Understand Acid-Base*. This reprint provides Dr. Stewart's original concepts of the physicochemical and quantitative approach to acid-base physiology. The new text has 20 well-referenced chapters, written by authoritative authors in the field, that review the development of quantitative acid-base physiology over the last 20 yr.

In Stewart's approach, the strong ion difference $\{[Na^+] + [K^+] + [Ca^{++}] + [Mg^{++}] - [Cl^-] + [lactate^-]\}$, total weak acids (protein, phosphate etc.) and pCO_2 are seen as independent determinants of pH. In contrast, bicarbonate and protons are variable dependents in the physicochemical approach but play a central role in the classic approach.

This book is published by acidbase.org,* a Web site that over the past few years was the easiest way to read Stewart's original text (it is still available on the Web site). This Web site serves as an additional resource and includes useful clinical calculators that make analysis of even complex cases easy from a mathematical standpoint. In addition to serving as a calculator, the Web site can be used as an excellent teaching tool with its ability to graphically display acid-base analysis results and plot them over time.

Much has been written about the advantages and disadvantages of Stewart's approach *versus* the conventional bicarbonate-centered approach to acid-base physiology. The basic advantages of Stewart's approach are nicely summarized in this book's foreword, where emphasis is placed on the benefits of unifying acid-base physiology and electrolytes into one concept. This approach enables practitioners to gain a panoramic view of physiologic imbalances. It is especially useful for students of the field who struggle to achieve oversight while being taught to examine a complex interplay of systems in a disjointed way that never reveals the full picture.

This book serves as an excellent resource for all who are interested in acid-base physiology. It offers a depth of knowledge well beyond of what is necessary for daily practice. Ironically, it is so well referenced that it also will serve as a useful starting point for further reading in this field.

* www.acidbase.org/lulu.com. Accessed July 18, 2009.