
The topic of non-neoplastic lung disease continues to be one of the most difficult and vexing areas in pulmonary medicine. Of the many good monographs, atlases, and other media that have attempted to tackle this vast topic, most are limited in depth and breadth and lack correlation of the clinical, radiology, and pathology findings. Until now there has not been a solitary reference book that can be used to wade through these deep and treacherous waters. Fortunately, this magnificent work fills that void admirably.

This hardbound book is the second fascicle in a new series of monographs that continues on the excellent tradition of the Atlas of Tumor Pathology, published by the Armed Forces Institute of Pathology (AFIP). Like its soft-covered counterparts on neoplastic disease, this new work is an extremely comprehensive and encyclopedic treatise that covers all aspects of non-neoplastic lung disease.

There are 18 chapters, covering an extremely broad array of topics. The first 2 chapters set the tone of the book. Chapter 1 succinctly covers embryology, anatomy, and histology. It is in the best interest of the reader not to overlook this most informative review of normal structure, which is critical to understanding the other topics that follow. Chapter 2 covers the importance of the clinical-radiology-pathology correlation and details the handling and processing of bronchoalveolar lavage and lung biopsy specimens. This chapter also includes a very important discussion of the general principles of lung biopsy interpretation, an overview of diverse histopathologic lung injury patterns, and tissue artifacts and incidental lesions that may occur in lung biopsy specimens.

The next 16 chapters cover a wide spectrum of topics in non-neoplastic lung and pleural diseases. The approach is multidisciplinary, as each topic is subdivided with the following key headings: definition, clinical features, radiology findings, pathology findings, and differential diagnosis. Some chapters also include pathogenesis, treatment, and prognosis.

One of the greatest strengths of this book is in its lavish illustrations. The text is rich with tables, diagrams, and superb illustrations, of which the majority are in color (1,185 color and 284 black-and-white). This is no surprise to devotees of the soft-covered Atlas of Tumor Pathology, since the photographic and medical illustration departments at the AFIP are world-renowned. The majority of gross and microscopic photographs are in full color, razor sharp, and superbly reproduced. However, the chest radiographs, high-resolution computed tomograms, magnetic resonance scans, and ultrasound images are not as well utilized for each topic, and the quality of these images is quite variable.

Each chapter ends with a complete set of references, in alphabetical order and broken into subheadings. The majority of references are up to date, with a few citations from 2002, as well as classic articles from the mid-20th century. The index is easy to use, and the illustrations and tables are emphasized with boldface type.

A feature of this book is that its entire contents are available on the Internet. The original purchaser of the book is provided with a unique identifier code that allows for free Internet access to this virtual text. The on-line version features pop-up thumbnail illustrations (which are expandable to a full-screen view), a “smart index” that features more in-depth searches, and references that link directly to MEDLINE for retrieval of literature citations. Moreover, electronic access allows for easy cross-indexing within the various AFIP neoplastic and non-neoplastic fascicles that will be published in the near future.

This book is more expensive than the other AFIP fascicles, at a price of $195. Discounts of up to 30% are available to residents/fellows, subscribers of various AFIP series, and selected military personnel. Considering the costs of producing a hardbound book of this size with color plates, this price is not excessive and is competitive with other textbooks of pulmonary pathology.

In summary, Non-Neoplastic Disorders of the Lower Respiratory Tract continues the excellence in the series of text-Atlases produced by the AFIP. It would be most useful for pathologists, pulmonologists, thoracic surgeons, radiologists, and others interested in a comprehensive, multidisciplinary approach to the study of non-neoplastic lung diseases.

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Management of Respiratory Tract Infections, by John Bartlett, now in its third edition, is a very brief but surprisingly complete textbook of common infections of the respiratory tract. The book is very well outlined and referenced, with 5 main chapters: “Pneumonia,” “Acute and Chronic Cough Syndromes,” “The Common Cold,” “Streptococcal Pharyngitis,” and “Sinusitis.” At just over 270 pages (including references and tables), this book can easily be read in its entirety in just a few sittings. In fact, this is probably the best use of the book, as an educational tool for those beginning their careers in health care. The information presented is so elemental to the practice of medicine that it should be little more than a review to the experienced practitioner.

Each chapter is organized into sections, each of which is introduced by a “snapshot summary” that highlights, in a bullet format, the main points of the ensuing text. The book has clear and concise text and
easily holds the reader’s attention. Tables are employed throughout the book and greatly enhance the communication of concepts by being every bit as clear as the text. The chapter outline was somewhat awkward, since at least half of the book is dedicated to the important topic of pneumonia. Sections within this chapter cover major concepts (eg, community-acquired pneumonia), each of which is undoubtedly at least as worthy of chapter status as the narrowly focused chapters that follow. That said, one of the great strengths of the book is its willingness to address topics such as the common cold, which are often ignored as trivial in other textbooks.

The chapter on pneumonia is organized into sections, including community-acquired pneumonia, hospital-acquired pneumonia, pneumonia in the compromised host (including in patients with acquired immune deficiency syndrome), aspiration pneumonia, and empyema. The clinical utility of this book is enhanced by the fact that it is organized around clinical syndromes, rather than specific pathogens, as is often the case in textbooks. Unfortunately, the scope of the book is sufficiently narrow that it leaves important but less common problems (eg, tuberculosis, fungal pneumonias) largely unaddressed. Omissions such as those limit the book’s utility as a reference tool. Strengths of the pneumonia chapter include a very complete discussion of diagnostic techniques, cogent management algorithms, and a table of the doses and modes of delivery of relevant antibiotics. Exhaustive lists of causal agents and the classes of antibiotics to which they should be sensitive are reminiscent of, and add nothing to, the pocket handbooks that are in common use.

The discussion of acute and chronic cough syndromes was adequately covered, but I found it odd that the author used this opportunity to discuss pathogens, including Chlamydia pneumoniae, Mycoplasma pneumoniae, and influenza in some detail. Though these discussions were excellent, they were conspicuously absent in the pneumonia chapter and would’ve been more appropriately placed there. The focus of the chapter appeared to wander at the end, with a somewhat superficial discussion of the noninfectious causes of cough.

My favorite chapter was the one on the common cold. This chapter represents the most scholarly discussion of this common annoyance that I have encountered to date. My interest was probably piqued by the fact that I was actually suffering from a cold at the time that I read it. In that light it is probably not surprising that I found the sections on prevention and treatment most interesting, though the paucity of data from which the author had to draw was somewhat discouraging. Sinusitis is covered, with similar aplomb and limitations, in the last chapter of the book. The chapter on streptococcal pharyngitis is a bit of a non sequitur in that the discussion was so in-depth that it seemed out of step with the more general nature of the rest of the book. As a result the book does serve as an excellent reference tool on streptococcal pharyngitis.

In summary, this book provides a nice overview of common respiratory tract infections. The author is to be congratulated for his clear and concise descriptions of clinical syndromes affecting both the upper and lower respiratory tracts. However, the overview nature of the presentation, coupled with the relatively narrow scope of the subject matter, limits this book’s utility as a standalone textbook; the material would be more appropriately presented in a textbook of general medicine. In a sense this book suffers from an identity crisis: not small or succinct enough to function as a handbook but not detailed enough (with the exception of streptococcal pharyngitis) to serve as a reference tool. I might be inclined to make this book required reading for medical students. However, as an experienced physician, I doubt the book will leave its perch on my bookshelf before the next edition is available.

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As a physician training in adult pulmonary and critical care medicine, I found this text very informative. The field is changing rapidly; older texts and previous editions are less reliable resources. Given the size and comprehensive nature of the text, I didn’t think I’d be able to read many sections entirely. I found that I enjoyed reading most sections from beginning to end because they were exceptionally well written, and I gained a better perspective on many critical care issues.

The text is designed as a reference for physicians, scientists, and experienced critical care nurses and therapists. It is a useful resource for intensive care unit (ICU) staff and trainees in any discipline related to critical care and who are looking for an encyclopedic view of topics relevant to adult critical care. Given its size and breadth, it would be a daunting assignment for a beginning student. However, individual chapters are quite readable and provide insightful supporting information for those either new to the field or experienced and seeking a recent comprehensive reference.

The book is organized into 9 parts that mimic an organ-system approach to the ICU patient. Each of the 78 chapters begins with an outline. My 2 favorite aspects of the book are (1) the history of the topic at the beginning of most chapters and (2) the key points at the end of each chapter. The references are extensive and key references are highlighted. Many parts of the text are redundant, which is understandable given the breadth of material covered. Remarkably, there are few instances of inconsistency.

Topics that do not have a dedicated chapter are not easily found. For instance, there is relevant material on ventilator-associated pneumonia both in chapters dedicated to pneumonia and in chapters dedicated to nosocomial infections.

Part I, comprising 19 chapters, deals with critical care procedures, monitoring, and pharmacology. The first 2 chapters are on cardiopulmonary resuscitation, cardiac arrest, airway management, and endotracheal intubation. Though these are well written, it is difficult to imagine how helpful they would be to someone not yet experienced in advanced cardiac life support. The third chapter, which is on arterial and pulmonary artery catheters, is exceptional. Chapters 4 through 11 deal with specific procedures and interventions, such as cardiac pacing, pericardiocentesis, balloon pump counterpulsation, echocardiography, mechanical ventilation, bronchoscopy, cardiac monitoring, and noninvasive respiratory monitoring. My favorite chapter in this part is Chapter 12, on arterial blood gases. I found it very well written and potentially a useful resource for medical students learning pul-
monary physiology and pathophysiology. The chapters on tracheostomy, chest tubes, and intracranial pressure monitoring were helpful reviews of critical care procedures that are not often part of everyday practice. I expected the chapters on sedation and drugs to be redundant, but they were nicely complementary.

Part II, on cardiovascular disease, begins appropriately with a chapter on shock. This chapter includes a greater percentage of basic science information than others. This seems appropriate given the introduction of novel agents for the treatment of sepsis. Some aspects of shock are redundantly presented in the general chapters on shock of specific etiologies, such as cardiogenic and distributive shock. This adds to the length of the book but allows individual chapters to stand alone as resources. The review of recent trials for septic shock (Chapter 22) was excellent. I found Chapter 24 on hypovolemic shock difficult to follow, perhaps because of its less-than-ideal organization. The chapters on nonsurgical management of traumatic shock and anaphylaxis were short but sweet. I appreciated the perspective provided by the number of trials of heart failure described in Table 27–2 in the chapter covering severe heart failure. The chapters on acute coronary syndromes and arrhythmias did an excellent job of summarizing treatment options for these ubiquitous critical care conditions. The chapters on cardiac valvular heart disease, acute aortic dissection, and hypertensive crisis were thorough but otherwise unremarkable. The chapter on the management of the post-cardiac-surgery patient is excellent and comprehensive.

Part III covers critical care pulmonary disease. The chapter on acute respiratory failure is rather broad and tries to cover too much material. It might be better to dedicate a chapter to acute lung injury, since it is so commonly encountered in the ICU. I enjoyed the chapters on chronic obstructive pulmonary disease and hyperventilation but mostly enjoyed the sections related to respiratory muscle dysfunction, nonpulmonary causes of respiratory failure, and upper airway obstruction. There is some overlap between the chapter on respiratory muscle dysfunction and later chapters on neuromuscular disease in the ICU. Chapter 42, on complications of critical illness, could serve as the cornerstone of the text. The complications included pneumonia, nosocomial pneumonia, and catheter-related bloodstream infections. I thought there should be separate chapters on severe community-acquired pneumonia, nosocomial pneumonia, and ventilator-associated pneumonia. I wish everyone would read and follow the recommendations in the chapter on weaning patients from mechanical ventilation. The chapters on pulmonary embolism and heparinization were thorough but did not add much to my understanding.

Part IV, on infectious diseases related to critical illness, was very helpful. The chapter dedicated to nosocomial infection could stand as a text on its own. The other chapters cover antimicrobial therapy, antifungal and antiviral therapy, immunosuppressed hosts, and specific critical illness infections such as toxic shock, typhilitis, Hantavirus, and meningoencephalitis.

Part V covers renal disease and metabolic disorders. These were helpful reviews but did not add much to my understanding of acute and chronic renal failure. The chapter covering electrolyte and metabolic abnormalities was excellent and informative. Included in this part were chapters covering diabetic emergencies, hypoglycemia, adrenal insufficiency, and thyroid disorders, which proved to be helpful reviews. These sections are already in need of updates, given the interest in tighter glucose control and relative adrenal insufficiency in patients with sepsis.

Part VI, “Neurologic Disease in the Critically III,” includes the best review I have ever read of coma and neurologic criteria for brain death. It is written from a critical care perspective and provides a clear rationale for the evaluation of patients about whom it is imperative to be accurate. The chapters on muscular paralysis, seizures, and head injury complete an excellent section on neurologic issues pertinent to critical care.

Part VII includes the topics of liver failure, gastrointestinal bleeding, and pancreatitis. It also has chapters dedicated to the related topics of hemorrhage, thrombosis, and blood product use. This part concludes with chapters on nutrition and the care of cancer patients, which are important subjects but seem a bit out of place.

Part VIII covers the care of burn injuries, poisoning, hypothermia, and hyperthermia. These turned out to be great review material, along with the chapter on endocrinology for critical care.

Finally, Part IX covers ICU administration, ethics, acute and subacute psychiatric disorders, and severity of illness scoring systems. I thought the chapter on psychiatric disorders seemed out of place in Part IX. As well, Part IX might have been moved to the beginning, so as to provide a more global initial perspective on ICU care and management. The chapter on psychiatric disorders could be included in the neurology section, as could the chapters on sedation and pharmacology.

In summary, this book is large and rather expensive, but it is also timely, comprehensive, and well written. It is clear that each chapter is written to stand alone, and, with few exceptions, the chapters are clinically relevant. I like the idea that I can use this text as a starting point to review a critical care topic or prepare a lecture. The editors have provided some helpful uniformity with chapter outlines, lists of key points, and references. They have not, however, entirely tackled some of the more difficult issues of a comprehensive text, such as limiting redundancy. There are opportunities to improve upon this edition, but I have found my new favorite critical care text.

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One of the “catch phrases” in medicine over the last few years has been “evidence-based medicine.” This term is now used almost daily, both at the bedside and in the published literature. Many basic practices in the care of critically ill patients have changed based on the principles of evidence-based medicine. Evidence-based medicine has become the reference tool by which to judge the effect of an intervention on patient outcome, because it provides the greatest justification for conclusion of causality. It is subject to the least bias and provides the most valid data upon which to base all measures of benefits and risks of particular therapies.

The Handbook of Evidence-Based Critical Care provides us with an excel-
lent introduction to the topic. This soft-cover book is organized with an organ-system-based table of contents, which allows the reader to rapidly look up key topics in the practice of critical care. Each chapter is organized with major headings and subheadings, which makes for exceptionally easy reading and use of this reference work.

The first part of the book, “The Respiratory System,” presents the essentials of 14 major topics in patient care. Topics as diverse as mechanical ventilation, acute respiratory distress syndrome, and the use of chest radiography are covered. The chapter on mechanical ventilation is excellent in that it gives the practitioner a concise introduction to the topic. All of the chapters in this section and in the whole book can be used by both students and experienced practitioners, and the brief way that topics are handled can be useful to all types of health care providers, therapists, nurses, and physicians.

The book covers many uncommon diseases, which makes it an excellent text to have in the intensive care unit library; Part 4, “Renal and Metabolic Issues,” is a good illustration of this. Acid-base disturbances are described in helpful tables that would assist rapid diagnosis and treatment. Flow charts help to organize one’s thoughts in approaching acid-base disturbance problems. I believe the most experienced attending would find this helpful for both patient care and the education of students.

Many broad-based topics are introduced in the section, “Miscellaneous Intensive Care Unit Topics.” The reader is introduced to such topics as end-of-life issues, which is highly timely. The last chapter in this section, “Marik’s Evidence-Based Common-sense Critical Care Rules,” ends the book on a note of humor.

Overall, this is an excellent introduction to the concept of evidence-based medicine. It will be most helpful for students and junior staff members during their first rotation in intensive care. Since it is a true white-coat-pocket book, students can carry it on bedside rounds for easy reference. Nursing and respiratory care professionals will also find this book “a must” to introduce them to the broad-based field of critical care medicine. The writing is clear, logical, and highly organized, which makes for fast and enjoyable reading. I believe this book will get daily use in most intensive care units, by a wide range of readers.

**Mechanisms of Organ Dysfunction in Critical Illness**

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This book is a continuation of the very successful Update in Intensive Care Medicine series and aims to provide a state-of-the-art overview of many aspects of the pathophysiology of organ dysfunction in critical illness. As a basic scientist and physician, I was intrigued by the topic and excited to explore a collection of reviews from leading researchers in the biological and clinical aspects of critical care, as compiled by 2 prominent authorities in the field. After spending the last 2 months examining the book as both a reference resource and as educational reading, I have to say the results were mixed.

Given the burgeoning field of critical care research, which now integrates nearly every discipline of basic and clinical science, the topic of organ dysfunction is an important one, and the goal of assembling a collection such as this is admirable, if a bit daunting. The contents of *Mechanisms of Organ Dysfunction in Critical Illness* encompass a broad survey of the topic, ranging from mitochondrial biology and mechanisms of inflammation to organ-specific sections on the lung, kidney, gastrointestinal tract, and brain. Though this compilation is flawed in its lack of a uniform approach to the subject, the material often feels inaccessible and the chapters uneven in their execution, perhaps reflecting differences in the various authors’ perceived audience. This is compounded by the book’s lack of an integrating overview (the only introductory remarks are on the book’s jacket) and its organization into loosely drawn divisions (eg, “Mitochondrial Biology,” “Lung and Kidney,” and “Organ Dysfunction: Detection and Intervention”) without much framework for those unfamiliar with the topic. The chapters themselves range in their approaches to the stated topics.

Many chapters, such as the one by Losser et al, “Multiple Organ Failure and the Kidney,” and the one by Kochanek and Clark, “Key Mechanisms of Secondary Neuronal Damage After Brain Trauma,” achieve an admirable balance between nuts-and-bolts basic science and well organized integrative review. This approach allows access to the material and readily available “take home” messages for the uninitiated reader, while remaining interesting and informative to those already versed in the topic. Other chapters fail to live up to their titles, such as Lee and Downey’s examination of the “Role of Leukocytes in Sepsis and Lung Injury,” which, while fascinating reading, devotes 9 of its 11 pages to neutrophil elastase, leaving those unfamiliar with the fine points of neutrophil biology a bit in the dark.

Chapters of particular interest to those involved in the pulmonary aspects of critical care include excellent chapters on pulmonary vascular dysfunction (by Finney et al) and the influence of mechanical ventilation on organ dysfunction (by Whitehead and Slutsky). Matthay’s chapter on pulmonary epithelial injury is also excellent, but too brief (4 pages) to really flesh out this very interesting subject. Other sections, such as those on mitochondrial biology and microcirculatory dysfunction, serve as good introductions to the issues of oxygen delivery and consumption, and, though a bit technical, may be very interesting to those involved in respiratory care.

Without exception the chapters are well-written and concise, though some are too brief. Most of the authors make an effort to clearly define their terminology, and there is less technical jargon than is typical of such a scientific volume. A use-
ful abbreviations list precedes the first chapter of the collection and is fairly extensive.

This soft-cover book is a handsome edition, printed on good stock, and, though it was a bit dog-eared after my efforts, it was still in good condition. There are remarkably few typographical errors for a medical/scientific book, and the illustrations (all black-and-white) range from adequate to truly excellent. The book is well referenced, clearly demonstrating the extensive knowledge of the various authors, and it frequently serves as a good stepping-off point for further reading of the literature. The book’s index, however, is limited and makes some strange choices (for instance, listing “polymorphonuclear neutrophil” [sic] and “neutrophils” with completely different page references), which effectively closed a potential avenue of access to the material.

Ultimately, Mechanisms of Organ Dysfunction in Critical Illness is not for the casual reader. But for someone wishing a broad yet concise primer of cutting-edge science in the expansive field of critical care medicine it may be an excellent resource.

Others may wish to rely on journal review articles culled on a subject-by-subject basis. Hopefully the next edition will be updated and present a more consistent experience for the reader.

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