

Pulmonary Hypertension. Marc Humbert and Joseph P Lynch III, editors. *Lung Biology in Health and Disease* series, volume 236, Claude Lenfant, executive editor. New York: Informa. 2009. Hard cover, 400 pages, \$249.95.

Pulmonary Hypertension, edited by Humbert and Lynch, is volume 236 in the long-standing *Lung Biology in Health and Disease* series. This series had last addressed the topic of pulmonary hypertension 12 years ago. In the interim there have been major advances in the biologic understanding of the disorders, and the number of medications used for treatment has expanded. This volume is a timely addition to the pulmonary hypertension literature. The stated goals are both to provide up-to-date information about pulmonary hypertension pathobiology and treatment and to stimulate directions for further research.

The intended readership is largely clinicians caring for complicated pulmonary hypertension patients and researchers interested in mechanism of disease. Respiratory therapists in general do not have as extensive a role in caring for these patients as they do in other lung diseases because pulmonary hypertension does not primarily involve the airways or alveoli. However, respiratory therapists are involved in assessment of resting and exercise oxygenation.

The chapter authors come from Europe, North America, and South America. The volume has 7 sections: classification, epidemiology, pathobiology, pathogenesis, and genetics; imaging and diagnosis; clinical disorders; medical treatment; atrial septostomy and surgery; difficult pulmonary hypertension; and end-points and clinical trials. The chapters and sections can be read either individually to glean information about a single topic, or sequentially like a textbook.

The authors are recognized experts in their fields. The material is well selected and organized, although it lacks a chapter on pulmonary hypertension in left-heart disorders. Almost all of the individual chapters present detailed information and have extensive reference lists that are quite up to date, but of course don't mention some of the most recent clinical studies, since the field is progressing so rapidly. The chapters

are generally concise (10–15 pages) and readable. When read through as a textbook there is a degree of repetition in the chapters on epidemiology, diagnosis, and treatment. However, if the chapters are accessed individually, then repeating such information in each chapter does become useful.

The quality of the information presented is excellent. Some chapters stand out. The chapter on pathology contains excellent color plates of the histology of the pulmonary vessels. The discussion on the pathogenesis of pulmonary hypertension organizes a wealth of information that is otherwise spread through multiple primary sources. The discussion of prostaglandin treatment is detailed and has a very useful table that summarizes the results of treatment trials. The discussions of pediatric disease and pulmonary hypertension during pregnancy cover especially difficult areas of treatment.

I would have preferred to see additional discussion of adaptive mechanisms in the right ventricle to pressure and volume overload, more uniform use of abbreviations, larger representations of radiographs, more echocardiograms, additional cross-referencing between chapters, and inclusion of clinical trial results in tables in the treatment chapters that discuss endothelin receptor antagonists and phosphodiesterase type-5 inhibitors.

This edition will be a useful reference for many years for clinicians who regularly or intermittently care for pulmonary hypertension patients. The importance of the information to respiratory therapists depends on how often they are involved in evaluating pulmonary hypertension patients.

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Chronic Obstructive Pulmonary Disease Exacerbations. Jadwiga A Wedzicha and Fernando J Martinez, editors. *Lung Biology in Health and Disease* series, volume 228, Claude Lenfant, executive editor. New

York: Informa Healthcare. 2009. Hard cover, 456 pages, \$249.95.

Under the executive editorship of Claude Lenfant, former director of the National Heart, Lung, and Blood Institute of the National Institutes of Health, the "White Books" series, *Lung Biology in Health and Disease*, now comprises more than 230 volumes. Since the 1978 publication of the first book in the series devoted to COPD, edited by Petty, there have been more than a dozen volumes dealing with this disorder. This is the second one devoted wholly to COPD exacerbations, the first having been edited by Siafakas, Anthonisen, and Georgopoulos and published in 2004. That another complete monograph on this aspect of COPD should be needed after just 5 years illustrates both the volume of work being done in the field and its importance in respiratory medicine.

This book's editors are internationally respected authorities on COPD exacerbations. They have recruited 80 contributors from 10 countries, with the largest number (30) coming from the United Kingdom. Aspects of the topic are addressed in 6 general subject sections: definitions, epidemiology, and differential diagnosis; mechanisms and pathophysiology; the impact, management, and prevention of exacerbations; and issues for the study of COPD exacerbations. The 37 chapters are mostly uniform in organization and typically 10–12 pages in length, with most citing 30–50 references and incorporating relatively few figures and tables.

In the preface the editors write, "For this book, we have assembled international experts, both clinicians and scientists with an interest in COPD exacerbations, to review critically the current literature and provide up-to-date reviews on the various issues as well as highlight the many controversies and bottlenecks in the study of exacerbations." This is thus a book on the *study* of COPD exacerbations, whose contributors review the available evidence in their respective areas. It is not their purpose to tell the reader how they think exacerbations should be managed. As a result, in most chapters the "bottom line" is a series of statements about what the studies have shown, which fall short of direct guidance for the clinician faced

with managing an individual patient. This is not a criticism, but rather a clarification of the book's goals and how it will most likely be used.

Among the strongest chapters are those dealing with how COPD exacerbations are to be defined, both for clinical purposes and for inclusion in research studies. The first chapter, by Rennard and Leidy, is the best summary I have seen on the problems of definition and the assessment of severity. Skipping to the final section of the book, excellent chapters on the design of studies on COPD exacerbations (by Martinez, Han, and Curtis), and on the statistical treatment of study results (by Aaron), show how these aspects of the evidence informing treatment decisions are as important for clinicians as they are for investigators.

Seventeen chapters cover various aspects of the mechanisms, pathophysiology, and impact of COPD exacerbations. By and large these are clear, comprehensive, and current (as of 2008). The main individual components of the management of COPD exacerbations, such as bronchodilators, corticosteroids, antibiotics, and supplemental oxygen, are then discussed in separate chapters. Generally, these provide concise, accurate, and up-to-date summaries of the relevant studies. Because for most aspects of management rationale remains more persuasive than empirical evidence, at least from the standpoint of outcomes relevant to patients, the authors of these chapters can offer few solid conclusions or practical recommendations. An exception is the chapter on noninvasive ventilation by Miller and Elliott, given that the evidence here is perhaps stronger than in any other aspect of management. After an excellent review of the literature on the improvements in patient-relevant outcomes that can be achieved with noninvasive ventilation during severe exacerbations, as well as on patient selection, the choice of equipment, and where in the hospital it should be carried out, the authors provide the reader with practical evidence-based guidance on its use.

The companion chapter on invasive mechanical ventilation is less successful. It includes considerable material covered in other chapters, and does not agree completely with the recommendations in the chapter on noninvasive ventilation. Invasive mechanical ventilation is treated mainly from the perspective of clinical epidemiology, and practical issues such as facilitating patient-ventilator synchrony, minimizing

dynamic hyperinflation, and other physiological challenges for managing clinicians are not addressed. The discussion of weaning includes a fair amount of data from patients with diagnoses other than COPD.

The prevention of COPD exacerbations has emerged as a key research objective as well as a focus for drug marketing in long-term management. The chapters in this section cover pharmacologic interventions such as inhaled corticosteroids and long-acting bronchodilators, as well as immunizations, self-management issues, and early intervention when exacerbations occur.

Some subject overlap among chapters is inevitable in a contributed book like this, and a brief orienting introduction with background information also covered elsewhere can be a help rather than a problem for the reader researching a given topic rather than reading the chapters in sequence. My comments above notwithstanding, and thanks, I suspect, to concerted efforts on the part of its editors, this book is largely free from redundancy. I could find no other instances of frank contradiction in different chapters that touched on the same subjects.

Some differences in writing style are discernible in the various chapters but these are not distracting. There are a few scattered grammatical slips but very few typographical errors or other production problems. The book is sturdily and attractively bound, although the promotional statements on the back cover are curiously misleading. The cover's brief description of the book's contents refers twice to imaging, and includes the statement, "This text also addresses imaging and how it plays a pivotal role in the diagnosis and study of exacerbations." The book has no chapter on imaging, and I could find nothing about imaging in either the index or the table of contents. There was only brief mention of chest radiographs in the chapter on differential diagnosis, and passing reference to computed-tomography angiograms in a cited study dealing with pulmonary embolism. This oddity was probably the work of someone in the marketing department who was largely unfamiliar with the book.

The editors have done an excellent job of covering their subject, and I cannot think of any important topic areas left unaddressed. This book is an important resource for investigators, teachers, and clinicians who wish to learn more about COPD exacerbations. Given the amount of new information that has appeared in the interval since the

first volume on this topic appeared, we will probably need yet another update in the next few years.

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Asthma and COPD: Basic Mechanisms and Clinical Management, 2nd edition. Peter J Barnes, Jeffrey M Drazen, Stephen I Rennard, and Neil C Thomson, editors. San Diego: Academic Press/Elsevier. 2009. Hard cover, 896 pages, \$149.95.

The second edition of **Asthma and COPD: Basic Mechanisms and Clinical Management** provides a unique and authoritative comparison of asthma and COPD. Written and edited by leading experts, it is a comprehensive review of the most recent understandings and findings about the genetic and basic mechanisms of both conditions, specifically comparing their etiologies, pathogenesis, and treatments.

Each chapter is a side-by-side contrast and comparison of asthma and COPD. The content and context of mechanism, triggers, assessments, therapies, and clinical management are discussed. The book presents the latest and most comprehensive understandings of the mechanisms of inflammation/pathophysiology in both asthma and COPD. There is an extensive list of references, along with detailed summaries and illustrations of the latest advances in both diseases.

This is the second edition, published 6 years after the first edition, with the same title. This book consists of very detailed, highly researched, yet complex views of the substantial progress and understanding of the biological basis of both asthma and COPD.

Textbooks such as the one discussed here are necessary for providing the foundation of the basic mechanisms for the biological makeup of lung diseases. In contrast, or at least in controversy, the authors describe the detailed pathophysiological makeup of the 2 most prevalent pulmonary diseases (asthma and COPD) while conveying ways they are similar but uniquely different. While current understanding of these disease pro-