

Pulmonary Pathophysiology: A Clinical Approach, 3rd edition. Juzar Ali MD, Warren R Summer MD, and Michael G Levitzky PhD. New York: McGraw-Hill. 2010. Soft cover, 304 pages, \$46.95.

The Lange medical book series from McGraw-Hill has been a popular line of concise review and reference texts for several years. On my own shelf sits *Pulmonary Physiology* by Dr Michael Levitzky, a concise and well written textbook that is very useful as an educational tool. I therefore jumped at the chance to review this book from the same series, with Levitzky listed as one of the editors. Most of the authors are colleagues of the editors in Louisiana. The textbook is available in print and in electronic form. This review is of the print version.

The textbook is divided into 2 sections. Section 1 is "Basic Evaluation: Symptoms/Problem Based." Section 2 is "Disease/Disorder Based." Each chapter concludes with illustrative cases and study questions that present some useful clinical pearls and help readers to consolidate their learning. A suitable range of clinical problems is discussed for such a concise text.

The symptom-based section has 5 chapters: the first is on dyspnea. The illustrative cases include acute hypercapnic respiratory failure in a person with COPD, and a case of diffuse parenchymal lung disease. In the second case the authors provide a concluding diagnosis of idiopathic pulmonary fibrosis when insufficient data are provided to support the claim.

The second chapter is on cough. Two systems of organization are put forward to help the reader organize an approach to the subject. The first is based on symptoms and physical signs, and the second is anatomic. Although not an exciting topic on the surface, it is a well presented discussion of one of the most common reasons for referral to respiratory physicians and nurses.

Chapter 3 provides an excellent review of the causes, evaluation, and management of hemoptysis. The content and general principles are sound. Bleeding is seldom discussed from the perspective of a physiologist, making this a surprising but enjoyable

section to read. The illustrative cases include lung cancer and mycetoma.

Chapter 4 covers noncardiac chest pain. The inclusion of this chapter helps clinicians to integrate their knowledge of general medicine with pulmonary medicine. The first illustrative case is one of pulmonary hypertension. It is an unusual choice given that angina is a late finding in pulmonary arterial hypertension. The second case is nutcracker esophagus, an important but uncommon and relatively benign cause of chest pain.

Finally, chapter 5 covers lung sounds encountered on physical examination. The cases include pleural effusion and congestive heart failure. It can be read for the sake of interest, although it is not likely to contribute to patient-management skills.

Section 2 is arranged by disease category. The chapters are presented in a logical sequence that facilitates reading cover to cover. Obstructive lung diseases are reviewed first. While not comprehensive, it is a reasonable overview of the subject for non-specialists. The exception is the single paragraph on dynamic hyperinflation. Although well written, the importance of this phenomenon with exercise and during mechanical ventilation could have prompted a more thorough discussion. An illustration would have been beneficial for visual learners.

The next chapter covers diffuse parenchymal lung diseases. This chapter suffers from the lack of clarity seen in most textbooks covering the topic. The first case is one of idiopathic pulmonary fibrosis, presented in a more appropriate manner than the case in Chapter 1. The second case is organizing pneumonia.

Chapter 8 is on pulmonary vascular disease. Several items in this section could have been covered in more detail. First, more discussion of pulmonary hemodynamics would have been helpful, such as the measurements made during pulmonary arterial catheterization. The role of left-ventricular diastolic dysfunction would have followed. Later on, in a discussion of the diagnostic tests, the utility of saline contrast echocardiography in the identification of chronic right-to-left shunt was omitted. Also absent was an appropriate discussion of pulmonary edema, the varied presentation of which is interest-

ing from a physiological perspective, and very important in clinical practice. Respiratory medicine textbooks are generally poor in this regard.

The chapter on occupational/inhalational/environmental disease integrates knowledge from the preceding portion of the book. It is a very good survey of the topic and could serve as a study guide for exams. Notable is the engaging manner in which this usually dry topic is presented. Less well presented is the topic of respiratory infections in the following chapter. It was a surprise to see *Escherichia coli* listed first in the table of bacteria responsible for pneumonia, as its causative role is somewhat controversial and other pathogens are much more common. The chapter on pleural disease is much better; it covers the core topics in a clear, concise, and accurate review.

The chapter on sleep disorders provides a well written summary of the cardiopulmonary interactions relevant to sleep apnea. This is another area where illustrations may have been helpful. A minor problem with this section is the use of outdated terminology for slow wave sleep. The previously used division of non-rapid-eye-movement stages 3 and 4 by an arbitrary electroencephalogram frequency is no longer standard. The two are now combined into stage N3, or non-rapid-eye-movement stage 3. This should be corrected in future editions.

Chapters 13 and 14 cover respiratory failure and the lung under stress. The headings imply a close relation, but the chapters cover very different topics. The former is a good introduction to the overlap of critical care, respiratory medicine, and anesthesia. The latter is a mixed bag of topics, ranging from cigarette smoking to transplant medicine to preoperative respiratory evaluation. It would be very difficult to create such a concise book without having a miscellaneous section such as this.

In all the chapters mentioned above, the cases and study questions present some content not provided in the preceding text. This is problematic for the lazy reader, as some important concepts may be missed. Only a handful of references are given in each chapter, but the references chosen are generally guidelines, textbooks, and seminal articles written by leaders in the field.

In summary, this textbook provides the reader with a good illustration of the importance of understanding physiology, but it does not provide the necessary level of detail to learn the topic in appropriate detail. Less experienced readers would benefit from having a reference text of pulmonary physiology on hand while reading this book. Furthermore, there are some typographical errors that would make the book unsuitable as a reference text, such as substituting CO₂ for CO in the discussion of diffusing capacity. Nonstandard approaches and algorithms are also occasionally described, such as the use of B-type natriuretic peptide in the evaluation of dyspnea. A target audience for this book is not specified in the cover or foreword, but it appears directed toward clinicians in training. It is clearly written and well presented. Consolidation of knowledge is facilitated by providing objectives, clearly labeling key concepts, and providing study questions with each chapter. Budding clinicians will see how their basic science education applies to individual patients. This is not a book that I would read a second time, but it would be useful for trainees beginning pulmonary subspecialty training in medicine or nursing.

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Oxford Case Histories in Respiratory Medicine. John Stradling, Andrew Stanton, Najib Rahman, Annabel Nickol, Helen Davies. *Oxford Case Histories* series. Peter Rothwell and Sarah Pendlebury, series editors. Oxford: Oxford University Press. 2010. Soft cover, 296 pages, \$69.95.

Authors have historically chosen many diverse formats in their quest to teach, including exhaustive compendia, physiologic approaches, and heavily footnoted referential texts, to name a few. It is more unusual to emulate the classic teaching method of mentoring younger physicians in part with material gleaned from clinical experiences. The *Oxford Case Histories* series presents cases in a most refreshing manner, using the Aristotelian concept of practical knowledge learned through experience and con-

veyed to those in search of knowledge. We heartily endorse this approach. These cases are chosen by clinicians from the files of Churchill Hospital in Britain, and are real-world cases with good teaching potential.

Oxford Case Histories in Respiratory Medicine has 44 short cases that cover many interesting topics in pulmonary and sleep medicine. It is not a cookbook or heavily referenced text, but it encompasses a wide breadth of topics. It is neither too superficial nor too deep, and it is both a delight and a challenge to read. The stated purpose of this assemblage is to demonstrate cases as they present to the respiratory/sleep physician and include common diseases that present in uncommon ways and vice versa. They range from the routine, such as asthma, to the more arcane, such as upper airway obstruction from Wegener granulomatosis. There are challenging sleep cases as well. The cases are presented as unknowns and a brief clinical history is provided. They are accompanied by relevant laboratory, pulmonary function, and imaging data. A series of questions and brief discussion follows. The flow of information to the reader often occurs in a fashion similar to that in clinical experience.

Although seemingly targeted to the senior British registrar or physician early in practice, this book should be appealing even to the most seasoned clinicians as well. The general medicine physician and respiratory therapists will likewise find it useful and fun. For all those being challenged, this review is a seeming departure from the more “structured learning” or the current fashion of “evidence-based” approaches. **Oxford Case Histories in Respiratory Medicine** accomplishes its goal of teaching with a non-evidence-based approach and relies more on the experiential aspects of acquired clinical knowledge. We heartily endorse this approach too. Those who have puzzled over the value of many clinical practice guidelines, and have realized that recent reviews, ranging from cardiology to infectious disease, have indicated that only 10–12% of clinical practice guidelines’ recommendations are based on level 1 evidence, will also realize that there is a strong value in cases presented by an experienced physician.

The cases in this book include a wide variety of topics and are indexed by both diagnoses and “aetiology,” which is useful. There are many graphics and tabled data. Many cases include key references.

Although we felt the book achieves its goals to educate with the case method and was challenging and fun to read, there were some distractions for non-United-Kingdom readers. A little more editing of the cases could have considerably improved the presentations. The graphics are suboptimal and the key points in many of the figures are difficult or impossible to see, and often we simply skipped the graphics and went to the “answer.” As an example, the high-resolution computed tomogram that is Figure 4.1 is said to show tree-in-bud changes, but lacks any detail. On a follow-up image the changes can be seen. Images for cases 2 and 3 preclude interpretation, and there are other inadequate figures as well.

The occasional presentation of weights in “stones” and the liberal use of international units present obstacles for those not used to those units. There are unexplained abbreviations, such as CETTE (contrast enhanced-transthoracic echogram) and DVLA (driver vehicle licensing authority), as well. That being said, there is a table of abbreviations and normal laboratory values to aid the reader through these annoyances.

There is liberal use of pulmonary function data. Unfortunately, the data tables are not uniform from case to case. Often data are listed as “Measured” and “% Measured” but sometimes no percent value is listed, but a single predicted value is. Diffusion (transfer) capacities are listed as TLco (mmol/min/kPa), which is not familiar to American audiences. Data presentation would have benefited from uniform presentation.

These distractions are offset by the number of outstanding and challenging case discussions, including case 9, which involves cystic and bullous lung disease, and case 2, which provides a good discussion on orthodeoxia. Case 21 presents the challenge of dealing with an airline pilot with sleep apnea. While many of the cases do not have a single correct answer and there is room for further discussion, the reader will be challenged.

In summary, we endorse the purchase and study of this volume and consider it a worthwhile addition to one’s library.

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