Asthma: A Clinician's Guide. Margaret Varnell Clark MS RN RRT-NPS. Sudbury, Massachusetts: Jones & Bartlett. 2011. Soft cover, 174 pages, \$39.95.

Asthma is one of the most common chronic respiratory diseases of both adults and children, and yet it is difficult to summarize the diagnosis and care of this disorder. Despite extensive research we still do not clearly understand its pathophysiology or genetics. Due to its high prevalence, all clinicians require knowledge of its diagnosis and management. The medications available for asthma are well established, but treatment algorithms continue to be rather complicated and confusing. In addition, there continue to be questions concerning how to use spirometry, peak flow values, and allergy testing to manage asthma. Finally, multiple national and international asthma guidelines, including those from the Global Initiative for Asthma (GINA)¹ and the National Heart, Lung, and Blood Institute (NHLBI),² have been published and implemented over the past 2 decades. These guidelines act as primers on asthma, that outline methods of diagnosis and management, but they can be long and unwieldy. Thus, it is a daunting task to write a book on asthma that succinctly covers all these areas and is up to date.

Margaret Clark's book, **Asthma: A Clinician's Guide**, is essentially a primer on asthma. It is intended as a general review of this complex disease for clinicians. The book is geared toward a readership of nurses, respiratory therapists, medical students, and primary care physicians. The sections include a general overview of asthma worldwide epidemiology, definitions of asthma, asthma pathophysiology, asthma medications, a distillation of the current asthma guidelines (primarily the NHLBI²), asthma severity, asthma testing, educational materials, and management strategies. This book is clearly written and thoroughly researched. However, some of the chapters, especially chapter 2 (on the definition of asthma) and chapter 7 (on stepwise management), are confusing and contain information that seems a bit out of place. After reading this book, clinicians will have received an excellent overview of asthma epidemiology

as well as some interesting historical facts. They will understand in part how to diagnose and manage asthma, and they will have been exposed, in the later chapters, to the general principles of the current asthma guidelines.

Chapter 1 is an excellent recap of asthma epidemiology. While asthma prevalence will probably change over time, and some of the facts quoted in this chapter might become dated, the general principles presented in this chapter should remain consistent for years to come. The chapter starts with a brief history of asthma, which is quite entertaining. This is followed by a well researched and clear presentation of the global impact of asthma, including the financial burden. The chapter closes with a useful table of asthma resources.

Chapter 2, "Defining Asthma," was confusing to me. Asthma is difficult to define, and there is not a clear distinction between definition and diagnosis. Thus, I expected a discussion on how asthma is defined through its diagnosis, and I was thrown off by the discussions of various asthma subgroups. Asthma is diagnosed/defined by air-flow obstruction with reversibility and associated signs and symptoms. While asthma may present in many ways, the general definition should hold true for all "types" of asthma. However, in this chapter Clark provides only a brief discussion of "what is asthma." Then, the remainder of the chapter discusses subcategories of asthma, including childhood asthma, occupational asthma, nocturnal asthma associated with gastroesophageal reflux, exercise-induced asthma, asthma in pregnancy, and treatment-resistant asthma. These are followed by discussions on aspirin sensitivity and vocal cord dysfunction. The asthma types noted above are not definitions of asthma but, rather, manifestations of a complex and diverse disease. Thus, the chapter title is misleading: it should be entitled "Different Presentations of Asthma." To define asthma we need to know diagnostic criteria and the rationale for those criteria. This chapter ends with a several-page discussion of environmental triggers, primarily allergens and tobacco smoke, which would have been better placed in the asthma management chapters.

The third chapter, which is a discussion of asthma pathophysiology, is well organized and a nice review of this topic. Chapter 4, "Diagnosing Asthma," is a succinct discussion of the objective and subjective measures used to diagnose asthma. Clark perhaps places too much credence in peak-flow monitoring, stating on page 49, "Both spirometry and peak flow measurement are useful and necessary for asthma control." and "Peak flow is useful for monitoring and measures large airway function." Spirometry and peak flow measurements are useful, but peak flow is not necessary in maintaining asthma control, and there is debate as to whether peak-flow monitoring is better than symptom monitoring alone in maintaining asthma control. Peak flow is influenced by large airway caliber, but small-airways disease can also decrease peak flow. In the brief discussion on biomarkers of inflammation, I would have liked more information on exhaled nitric oxides values. Exhaled nitric oxide is being used by some centers to help define and diagnose asthma. There is also a section on allergy testing in this chapter that seems out of place. Allergy testing would be more appropriately placed in the asthma management sections. Also, in the allergy-testing section there is no discussion of radioallergen sorbent (RAST) testing, which, according to the NHLBI asthma guidelines, is a reasonable alternative to skin testing.²

Chapter 5 discusses assessing asthma severity. It is a succinct distillation of the GINA and NHLBI guidelines, which now classify severity using asthma symptoms, medications needed to control those symptoms, and the degree and frequency of asthma exacerbations. This chapter would benefit from having a table that lists the severity classifications with their respective criteria. This chapter also reviews asthma monitoring, though this is not reflected in the title of the chapter. Peak-flow measurements are again noted to be useful in assessing asthma control, which is only in part true, especially in children. Thus, a more robust discussion on the pros and cons of peak flow measurements would have been useful.

The remaining chapters are concerned with asthma medications and management strategies. They are essentially synopses of the NHLBI guidelines.² While this infor-

mation can be found within the guidelines, it is useful to have them succinctly provided in book form. In the medication section, cromolyn and nedocromil are mentioned as second-line drugs, but Clark failed to mention that these medications in some of their forms are not available in the United States and are rarely prescribed. The title of chapter 7, "Stepwise Management, Asthma Action Plans, and Patient Education," is a bit misleading, as it barely touches on the stepwise approach to asthma management. Chapters 8–11 summarize the NHLBI age-based recommendations and strategies for asthma management. They are well organized and provide an easy way to review the guidelines. I would have liked to have seen a discussion on the potential risks of long-acting β agonists. While they are still recommended, concerns about the increased risk of death with β agonists and how that affects their place in the asthma-medication hierarchy warrants a more detailed discussion. One nice aspect of the book is its glossary, which will be especially useful for students.

Overall this is an easy to read, informative primer on asthma. The book is nicely laid out with clear tables and figures. Clark has done her research thoroughly and provides excellent references. The information is up to date and provides a good overview on asthma management and the current asthma guidelines. Some of the chapters have misleading titles, and some materials (eg, the discussions on allergens) are placed in chapters where they do not fit well. The latter half of the book is a distillation of information that can readily be obtained from the NHLBI guidelines,² though it is still useful to have that information in book form. This book is best suited for students in the medical fields, but it would also be useful for nurses, respiratory therapists, and primary care physicians who may not have the time to digest the guidelines, which can be accessed via the Internet.

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Molecular Basis of Pulmonary Disease: Insights From Rare Lung Disorders. Francis X McCormack MD, Ralph J Panos MD, Bruce C Trapnell MD, editors. *Respiratory Medicine* series. Sharon R Rounds MD, series editor. New York: Humana/Springer. 2010. Hard cover, 434 pages, \$219.

Understanding how a CD player works doesn't make a disc's music sound better. But if it's your job to fix CD players or tell customers when to give them up, knowing how they work helps a lot. **Molecular Basis of Pulmonary Disease: Insights From Rare Lung Disorders** is not an easy read, and it's not for every pulmonary physician or student of lung disease. It is a 2010 compendium of 19 chapters about 17 different rare lung diseases. Some are quite rare (eg, pulmonary capillary hemangiomatosis), but some are seen with some frequency by consulting pulmonary physicians (eg, pulmonary Langerhans cell histiocytosis), and some are relatively common (sarcoidosis).

This book's greatest appeal to me was the chapters on diseases one sees in clinical practice or presented at a conference. For several of them the book gives useful and sometimes intriguing information that provides the gratifying sensation that one is thoroughly and articulately updated about what the patient and caregivers need to know. An example is Vassallo's chapter about pulmonary Langerhans cell histiocytosis. This and other chapters dutifully adopt the latest nomenclature to keep one current in "lung-disease speak" (eg, "eosinophilic granuloma of the lung" and "histiocytosis X" are apparently passé nomenclature), but this chapter's 20 pages on this still puzzling disease update the reader about what really matters. Is the disease related to proliferative histiocytic disorders that may be prescribed chemotherapy? Yes and no: the same cell lineage is involved, but pulmonary Langerhans cell histiocytosis is nearly always polyclonal; it appears to be a reactive disorder.

In olden days, bronchoalveolar lavage fluid was collected in electron-microscopy medium for fixation and examination for cells with Birbeck granules—those intracellular tennis-racket-mimicking organelles. Then, briefly, it was CD1a antigen staining for diagnosis. And now S-100 staining is most commonly used. Are these 3 techniques similarly informative? No, they aren't: S-100 is found on many types of cells, and 5% positivity for CD1a in cells in bronchoalveolar lavage fluid, together with a consistent clinical picture, is the most secure and convenient way to make the diagnosis when electron microscopy and electron-microscopy media are not available.

Does pulmonary Langerhans cell histiocytosis occur only in cigarette smokers? No, but young adults who smoke make up over 90% of the cases in existing case series. Will smoking cessation make the disease go away? No, not in everyone. Are corticosteroids worth trying? Vassallo thinks so, when the disease is progressive (a 15% decline during monitoring of the FEV₁ or diffusing capacity of the lung for carbon monoxide), and he presents his sensible approach: 0.5 mg/kg/d of prednisone for 3 months, then repeat pulmonary function testing, with rapid steroid tapering to zero if no benefit is seen. Will he try corticosteroid treatment even if a smoking patient is unable to quit cigarettes? Yes he will, and so should we.

Does pulmonary Langerhans cell histiocytosis present with both restrictive and obstructive physiology on pulmonary function testing? Yes it does, perplexing test-taking fellows and the rest of us, and Vassallo explains why: although often called an interstitial lung disease, small airways are usually involved, especially early. Progressive disease leads to fibrosis and restrictive physiology, and cysts lead to air-trapping and further obstruction.

What is the molecular basis of pulmonary Langerhans cell histiocytosis? Vassallo and other experts don't know, and he doesn't spend time "hand-waving" or describing obscure animal experiments of questionable relevance. Genetic factors are probably not involved, he writes, because the disease is sporadic and doesn't run in families. Cigarette smoke is a reliable recruiter and increaser of the population of dendritic cells in the lungs of rodents and humans, but that is not enough to commonly provoke pulmonary Langerhans cell histiocytosis. Granulocyte macrophage colony stimulating fac-