

An Atlas of Chronic Obstructive Pulmonary Disease. Trevor T Hansel MSc PhD and Peter J Barnes DM DSc. Foreword by Bartolome R Celli MD. New York: Parthenon. 2004. Hard cover, illustrated, 290 pages, \$99.95.

The two authors of **An Atlas of Chronic Obstructive Pulmonary Disease** set out to provide a comprehensive and up-to-date reference that covers all aspects of chronic obstructive pulmonary disease (COPD). The book has a handsome, glossy, hard cover, and the colorful pictures and diagrams on the cover hint at the authors' very successful attempt to cover the topic in atlas form. The book is divided into 8 chapters, ranging from definitions and epidemiology to new drugs and potential future treatments. The book includes a very complete (10-page) index. The text font is relatively large (approximately 10-point) and easy to read.

Even though the book is billed as an atlas, the content is extensive and complete. The book's most impressive element is the 187 figures, tables, diagrams, and photographs within its 290 pages. The vivid colors and large size (often full-page and rarely less than half-page) of the figures catch and keep the reader's attention. The tables present information in a logical format. The figures of inflammatory cell and mediator pathways and pharmacologic pathways are good, making these potentially complex and difficult subjects relatively easy to comprehend. The figures are well referenced, for those who wish to review the original research. Various medical devices, including inhalers, noninvasive positive-pressure ventilation equipment, and pulmonary function testing equipment, are illustrated. Overall, the figures substantially enhance the text, covering concepts and topics that might not otherwise be adequately reviewed, even with much longer text discussions.

On the first page of each chapter is a chapter outline, which in most chapters is followed by a chapter summary. References are listed at the ends of the chapters, and the chapters have an average of 146 citations.

The first chapter covers definitions, epidemiology, and etiologies of COPD. It emphasizes the findings of the Global Initiative for Chronic Obstructive Lung Disease (GOLD), including the GOLD July 2003

update, making this a very timely text. Unlike most other texts, this atlas provides Internet addresses that will help the reader find the most up-to-date information. In addition to the GOLD report, the chapter discusses the merits and validity of the COPD classifications of the American Thoracic Society, European Respiratory Society, and British Thoracic Society. The social and economic burden of COPD is discussed from a global perspective.

Chapter 2 discusses the pathophysiology and pathology of COPD. The several schematic diagrams of inflammatory cells and mediators are good examples of pictures being "worth a thousand words." The authors efficiently used figures to outline the interconnected inflammatory pathways, in a very readable fashion. The discussion of pathology is supported by illustrations and photomicrographs of histology slides. The chapter ends with a good description of the similarities and differences between COPD and asthma.

Clinical aspects of COPD are covered in Chapter 3. Complete history and physical findings, including assessment of chronic bronchitis, emphysema, and disease severity, are discussed. Also covered are the differential diagnosis and the indications for various pulmonary function tests and blood work. The chapter includes radiologic, electrocardiographic, echocardiographic, polysomnographic, and other diagnostic findings, as well as information on nutritional assessment and muscle strength testing.

Chapter 4 is devoted to emphasizing the importance of smoking cessation in the care of patients with COPD. It provides an excellent discussion of smoking-cessation medications. The chapter provides a systematic approach to smoking cessation and a long list of Web sites (of many different international organizations) that provide other smoking-cessation protocols and patient educational materials.

The longest chapter, Chapter 5, is devoted to drug therapy of stable COPD. New drug combinations, such as long-acting β_2 agonists with tiotropium, and long-acting β_2 agonists with inhaled corticosteroids, are included. Excellent discussions and diagrams of various delivery systems provide information not usually covered in other texts and articles. Diagrams of molecular

pathways, alongside the results of clinical studies for each class of drug, make for a well-rounded chapter. No mention is made of the role, or lack of a role, for oral corticosteroids for COPD. The chapter is otherwise inclusive of all drug classes and is rounded out by a short discussion on vaccination, mucolytics, and antioxidants.

Chapter 6 covers management of COPD exacerbations, beginning with definitions, clinical features, etiology, and evaluation of hypoxic and ventilatory respiratory failure. A stepwise approach to treatment and an excellent discussion on the use of antibiotics are provided. Also discussed is a protocol for initiation of noninvasive ventilation and there are brief discussions of nutritional supplementation, low-molecular-weight heparin, antivirals, and opiates. Indications for invasive mechanical ventilation are provided, but there is little mention of ventilator management or how to deal with the dynamic hyperinflation that COPD patients often suffer.

Chapter 7 reviews a potpourri of modalities, tools, and treatments, including pulmonary rehabilitation, tools to measure exercise capacity and quality of life, and treatments for nocturnal desaturation, obstructive sleep apnea, and depression. Oxygen therapy and delivery systems are well covered. Noninvasive ventilation for stable COPD is only briefly mentioned but is well referenced. The three pages dedicated to surgical treatments (bullectomy, lung-volume-reduction surgery, and lung transplant) allow the reader to compare and contrast these options for individual patients.

Chapter 8 is dedicated to new and potential COPD drugs. It provides a great deal of insight into the molecular and cellular pathophysiology of the disease and systematically reviews compounds that target each of the components of the inflammatory pathways. Lung regeneration and remodeling and new techniques for studying potential new drugs are briefly reviewed.

In general, the authors have provided a discussion suited for worldwide—not just a British—readership. The authors are international leaders in the field, having previously published hundreds of reviews and original studies of COPD and its treatment. They have included guidelines and information from around the globe, and P_{aCO_2}

and P_{aO_2} values are given in both kPa and mm Hg.

Taken in total, this atlas is well written and organized in an easy-to-use format. It covers the latest basic science and provides very practical and comprehensive clinical information. It is therefore a practical reference on COPD for a diverse readership, from respiratory therapy students to experienced specialists.

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Tobacco Dependence and COPD: A State-of-the-Art Series. (Reprint of the 'Thematic Review Series' published in *Respiration*, volume 68, 2001, and volume 69, 2002). Basel, Switzerland: S Karger. 2003. Soft cover, illustrated, 96 pages, \$24.50.

This soft-cover book is a reprint of 14 thematic review articles published in the journal *Respiration* in 2001 and 2002, on tobacco dependence and chronic obstructive pulmonary disease (COPD). The authors are well known European and American physicians who are experts in their fields. The book is in 2 sections: the first 7 articles address epidemiology, pathogenesis, management, and advances in COPD, and the final 7 articles address smoking-cessation, addiction, and future advances in treating tobacco dependence. The articles were intended to promote interest and provide information to the readers of *Respiration*. A few of the articles contain advanced content that may be difficult reading for some allied health professionals, but overall the articles provide a very good resource for physicians, respiratory therapists, nurses, and health care workers who assist in providing COPD education or smoking cessation.

The initial article, by Gustafsson, "The World Galloping Into Breathlessness," aptly summarizes the review series. He clearly makes the point that much is known about COPD and smoking cessation, yet much remains to be discovered. This is particularly important because of the delayed effects of cigarette smoking on the health care system: many of today's smokers will be lung-disease patients in the coming decades.

The next 2 articles describe the epidemiology and pathogenesis of COPD. These 2 reviews provide an outstanding summary of current data on COPD. The information in both articles is clearly presented and augmented well with graphs, charts, and pictures. These 2 articles are an excellent resource for COPD information.

The fourth article, "How and Why Exercise is Impaired in COPD," forwards the somewhat controversial view that COPD exercise is more limited by leg fatigue than dyspnea. The information is well presented and supplemented nicely with graphs and charts. My only argument with the chapter is that many of the studies that reported leg fatigue as the main limiting factor during maximal exercise testing used on bicycle ergometry,^{1,2} and bicycling may not be as relevant to daily living skills. A recent study by Man et al³ compared limiting factors during a walking test with COPD patients and found that breathlessness limited walking in 81% of patients tested, whereas leg fatigue limited 34%. A comparable test by Killian et al¹ on a cycle ergometry found limiting factors of 26% dyspnea versus 43% leg fatigue. I believe further study is needed to adequately determine the specific causes of exercise limitation in patients with COPD.

The article, "Management of COPD: Surgical Options," briefly reviews lung-volume-reduction surgery. Unfortunately, at the time the article was published, its author did not have the benefit of the (recently published) National Emphysema Treatment Trial, so more recent information on lung-volume-reduction surgery can be readily found.⁴ Nevertheless, the article's information is clearly presented and useful. I would have suggested including more information on lung transplantation, which, though limited by resources and availability, is still a viable surgical option.

The final 2 reviews cover COPD future advances and perspectives and summarize current thoughts on the potential to identify COPD and improve treatment. These chapters are clear and easily understandable. There are few graphs or diagrams but in this context there is little need.

Guest editor Karl Fagerström initiates the second half of the review on smoking cessation with his chapter, "What Is New With Tobacco Dependence," which provides a concise summary of the remaining articles on tobacco treatment, cessation, and future advances. I enjoyed the comparison that if 80% of all lung cancer and COPD cases

were created by a biological factor, such as alpha-1 antitrypsin deficiency, how many resources would we expend to find treatment? Should nicotine dependence, which is considered more of a psychosocial phenomenon, afford the same kind of treatment? It's an interesting point which begs for more thought.

The ninth article is "The Neurobiology of Tobacco Dependence: A Commentary," by Balfour, which is an excellent review of neurological response to nicotine. While doing research on smoking cessation for a recent article in *RESPIRATORY CARE*, I reviewed numerous articles on the neurology of nicotine dependence, but I could have saved much time by starting with Balfour's review. His commentary is concise and straightforward. Illustrations would have augmented the discussion, but overall the lack of illustrations did not diminish the quality of the review.

Computerized smoking-cessation assistance is the topic of "Using New Information Technology to Treat Tobacco Dependence." Information technology can assist in smoking cessation, but, as the author acknowledges, such computer assistance is limited to those who have computer access and know how to use computers.

The chapter "A Vaccine for Nicotine Dependence: Targeting the Drug Rather Than the Brain," reviews this exciting new research topic. The objective of the vaccine is to blunt the effects of nicotine on the "reward system." The author concludes that a vaccine for nicotine dependence may be helpful but clearly requires many accompanying therapies for smoking cessation (eg, counseling and medications). In this chapter it might have been helpful to use graphs or charts. Overall this review succeeds in providing a clear understanding of a complicated subject.

"Smoking During Pregnancy: A Way to Transfer the Addiction to the Next Generation?" is the next chapter. It discusses the neurobiology of the transference of nicotine from a smoking mother to an in utero fetus. It is clear that smoking mothers should be encouraged to quit, to prevent risk of low birth weight or preterm delivery. Further evidence demonstrates a relationship between prenatal exposure to smoking and behavioral problems such as attention deficit, hyperactivity, learning disabilities, and tobacco dependence later in life. These relationships are well referenced and convincing, though the authors correctly note that there are other