

Atlas of Sleep Medicine. Sudhansu Chokroverty MD, Robert J Thomas MD MMSc, and Meeta Bhatt MD PhD. Philadelphia: Elsevier/Butterworth Heinemann. 2005. Hard cover, illustrated, 362 pages, \$95.

This is an updated and revised edition of a major atlas of sleep medicine that was first published in 2003. This book is a joint venture from a group of dedicated neurologists and pulmonologists who have successfully employed a multidisciplinary approach to sleep medicine. In this edition they successfully present a diagnostic overview of sleep medicine and carefully integrate recent changes in the knowledge and management of sleep disorders. It is clear that this multi-author atlas provides a new diagnostic perspective to sleep medicine and is indeed a culmination of years of clinical experience and reflection by its authors.

This atlas is organized into 2 sections: (1) basic aspects of normal sleep architecture and scoring sleep technology, and (2) the diagnostic and therapeutic aspects of sleep. The first section deals with the standard and the recommended recording montages used in sleep laboratories. The section skillfully discusses pneumography, home monitoring, and event recordings. Benefits and pitfalls are also assessed.

The book's second section reviews clinical examples and discusses the recording artifacts frequently encountered during sleep-disordered breathing, pediatric polysomnography, and with overnight sleep titrations.

This unique atlas begins with the basics of polysomnographic and electroencephalographic (EEG) techniques, with special attention to current American Academy of Sleep Medicine guidelines for scoring sleep stages. It clearly explains the interpretation of various EEG findings on sleep studies and covers most of the major disorders in the International Classification of Sleep Disorders. The authors also integrated the new International Classification of Sleep Disorders, 2nd edition, into their discussion and they explain which tests are available, the indication for each, and the findings one can expect.

The section on sleep-disordered breathing emphasizes obstructive sleep apnea. The book also reviews a long list of cardiac, neurologic, and psychiatric illnesses that impact sleep EEG patterns. The section on pediatric sleep disorders talks about the wide array of common and uncommon

clinical disease presentations. The carefully selected clinical cases and polysomnograms demonstrate important concepts that are used to synthesize interpretation and to diagnose sleep disorders. Another useful feature is the hypnogram analysis section in which multiple sleep histograms are studied, along with a guide for interpretation. All the figures are in black-and-white. There is lavish use of polysomnogram tracings and hypnogram plots to illustrate normal and pathologic sleep laboratory findings and artifacts. Also discussed are drug-related artifacts and EEG phenomena.

In this book, clinicians have an impressive array of clinical data and observations to add to their armamentarium for the diagnosis of sleep-related disorders in children. The authors included numerous excellent polysomnograms, hypnograms, and high-quality figures and tables to good effect. Many of the figures show accurate representations of actual patient recordings that illustrate normal and pathologic sleep processes in both adults and children, and these provide a hands-on guide to evaluating sleep disorders.

The primary audience is sleep health professionals, of all levels, who want an overview of clinical sleep medicine and to learn practical clinical implications of advanced polysomnographic interpretation of sleep diseases. This is a very readable and well-illustrated text, designed to provoke interest in sleep medicine specialists as well as neurologists, pulmonologists, psychiatrists, pediatricians, otolaryngologists, general practitioners, and dentists. I highly recommended it to graduate and medical students, residents, fellows, and sleep technologists. While it does not go into elaborate detail for the sleep medicine physician or trainee seeking advanced pathophysiology discussions, it does serve as an excellent quick reference tool, an illustrative guide, and a valuable review tool, especially for the sleep medicine board examinations.

What I liked about this book is that it explains, in a very simple yet very effective manner, how to apply the principles of polysomnography and sleep medicine concepts. It surveys recording montages, pneumograms, artifacts, normal sleep, and findings in sleep disorders, ranging from the most practical to the esoteric. The book's strong points include the numerous easy-to-view illustrations of well-

lected examples, and its easy-to-use format. Like most atlases, the text is brief and limited to descriptions of the illustrated polysomnogram epochs. This precise layout and text free of jargon makes it easy to read for both the experienced specialist and a novice trainee. This is a visual guidebook to sleep disorders, consisting of a large number of illustrations and captions, enabling the user to visualize many different clinical situations. The chapters are well organized and integrated, with minimal substantive overlap or contradictions among chapters. There is also a continuity of themes between chapters. Readers will appreciate the balanced structure of each chapter, with a combination of relevant case vignettes and tables. The tables are easily readable and nicely complement the text. A highly systematic, practical approach was adopted, and key concepts are well illuminated with visual examples.

The chapter references are few but selective and up-to-date, with the most recent being from 2005. A list of abbreviations used in the book is provided at the beginning, as well as in certain sections of the book. I found the index very detailed and complete. The book's price is somewhat lower than comparable atlases. The format and print quality are good.

It would have been useful to end each chapter with a conclusion section or short synopsis. Specialists may think the book's main shortcoming is that it lacks detail and depth of coverage in specific topics. It is, however, an atlas of polysomnographic tracings, and is not intended to be an exhaustive review on sleep. The addition of a knowledge-assessment section, with questions and answers, would enhance the educational value for trainees.

The text lacks the scientific and evidence-based perspective on sleep disorders and management. Some of the conclusions are made on personal biases. For example, the author endorses use of bi-level pressure in particular clinical scenarios but fails to show any research data to support that approach. The authors kept the language lucid and avoided talking about controversies in sleep medicine. All the contributors shared their own opinions based on their experiences in practice and wrote as specifically as possible.

One possible problem is that the American Academy of Sleep Medicine is currently revising the existing and developing

new standards for polysomnographic scoring. Though it is not likely there will be major changes, such changes would put this volume out of date.

Overall, the book is a useful adjunct for sleep specialists and a practical reference for the busy clinician. I highly recommend it.

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The author reports no conflicts of interest related to the content of this book review.

Surgical Management of Sleep Apnea and Snoring. David J Terris and Richard L Goode, editors. Boca Raton: Informa/Taylor & Francis. 2005. Hard cover, illustrated, 492 pages, \$199.95.

Amidst the many volumes dedicated to sleep disorders and sleep-disordered breathing, this is just the third book devoted to surgical treatment of snoring and obstructive sleep apnea. Part of the explanation lies in the relative newness of sleep surgery as a field. Since the initial description of uvulopalatopharyngoplasty (surgery of the soft palate) as a surgical treatment of snoring, by Ikematsu in 1964,¹ and the application of this procedure to treat patients with obstructive sleep apnea, by Fujita et al in 1981,² the past 25 years have witnessed the development of many procedures designed to treat the soft palate and other regions of the upper airway.

This text is designed as a reference for surgeons interested in surgical techniques for treatment of snoring and obstructive sleep apnea. Others may find (1) the description of patient evaluation and nonsurgical treatment too brief, and (2) the discussion of surgical procedures too detailed and esoteric. While surgeons will probably need to supplement the text with additional reading and training, the book provides a sound framework from which the interested reader can approach the patient with snoring or obstructive sleep apnea, with an awareness of available procedures.

The chapters cover the anatomy and physiology of sleep and sleep-disordered breathing, nonsurgical treatments (such as positive airway pressure therapy and oral appliances), and surgical evaluation and

management. Approximately two thirds of the chapters are devoted to specific procedures, and the detailed discussions of techniques and the role of surgery in the treatment of sleep-disordered breathing are the core of the book. The illustrations, photographs, and radiographs throughout are clear and very useful in elucidating key points.

No surgical text would be complete without a discussion of anatomy. This book not only offers an excellent chapter on upper-airway anatomy but also a thought-provoking evolutionary perspective on that anatomy. The subsequent chapters on the physiology of sleep, sleep-disordered breathing, and nonsurgical evaluation of sleep-disordered breathing are good but perhaps not as clear and thorough as those that can be found elsewhere in the literature. Admittedly, these subjects are not the primary focus of the book, so relatively little space is devoted to them. One exception was the chapter on home sleep studies, which thoroughly reviews the validation studies for various home sleep study technologies.

As a sleep surgeon, I thought the editors' selection of individual procedures and combinations of procedures in a surgical plan was based, in some cases, on limited information. The devotion of an entire chapter to the Friedman staging system, which can be used to select patients more likely to have good outcomes after uvulopalatopharyngoplasty, was warranted. This chapter gives a clear summary of the work that has been reported in several separate publications and is valuable reading for any surgeon interested in snoring and obstructive sleep apnea. In contrast, other surgical evaluation techniques, such as radiographic imaging and video sleep endoscopy, did not receive the same attention and/or did not get as thorough a discussion of their association with surgical outcomes. A more complete assessment of the growing literature would have been welcome.

With the emphasis on surgical treatment, not surprisingly the discussion of nonsurgical options, such as positive airway pressure and oral appliances, is limited. However, the chapter on oral appliances was thorough enough and very practical; the presentation of many devices, with photographs, is appropriate for surgeons, who may not be providing these devices themselves but should be aware of their characteristics.

Patient (and procedure) selection and anesthesia management (intraoperative and postoperative) are both far-reaching topics,

and the authors of these 3 chapters faced daunting tasks. Although sleep surgery has made tremendous strides, these topics constitute much of the art of surgical treatment. As with the surgical evaluation of patients (mentioned above), a more comprehensive discussion of these topics would have been helpful. In particular, the anesthetic management of patients with sleep-disordered breathing—both for upper-airway surgery and nonupper-airway surgery—has increasingly become a topic of interest for physicians and major specialty organizations such as the American Society of Anesthesiology and the American Academy of Otolaryngology–Head and Neck Surgery. Though the existing literature is sparse, coverage of this topic should be expanded in future editions, to reflect the attention that has been devoted to it in the last few years.

The bulk of this book is dedicated to surgical techniques, and this is the book's greatest strength. A book written, by and large, by surgeons and for surgeons should provide an understanding of procedures and their application, and, indeed, this is the case. The high quality of the illustrations is invaluable. They do not provide as much detail as those in the commonly-used surgical atlases of otolaryngology and head-and-neck surgery that describe procedures other than those included in this book, but the illustrations and accompanying text are more than sufficient. Each chapter presents specific aspects of patient selection and discusses technique and potential complications.

In several cases the contributors (who in many cases are the surgeons who developed the procedure or made important technical modifications) incorporated technical modifications that they have developed since the original publications that described the procedures. For transpalatal advancement pharyngoplasty, these modifications are not found elsewhere in the literature. Others, such as the chapter on tracheotomy, present a range of techniques that are summarized clearly. Some of the chapters (eg, those on distraction osteogenesis and maxillomandibular advancement) are somewhat brief or simply do not provide sufficient detail for the reading surgeon to be able to perform the procedure. Nevertheless, the book otherwise succeeds with flying colors in its presentation of surgical procedures and their technical aspects.

The final 2 chapters are more philosophical than the rest and provide editorial perspective in 2 areas: the evaluation of surgi-