

An Atlas of Induced Sputum: An Aid for Research and Diagnosis. Ratko Djukanovic MD DM and Peter J Sterk MD PhD. New York: Parthenon Publishing Group. 2004. Hard cover, illustrated, 135 pages, \$119.95.

Sputum induction has been used for decades to aid in the diagnosis of pulmonary infections. This has proven particularly useful for identifying tuberculosis or *Pneumocystis carinii*. Over the past 15 years the evaluation of induced sputum for cells, soluble mediators, and biophysical and transport properties has become a useful research tool for enhancing our understanding of chronic airway diseases such as asthma, cystic fibrosis, and chronic bronchitis.

Djukanovic and Sterk have collected some of those data in a handsomely illustrated atlas intended for pulmonary researchers. The book is generally well organized, but there are large gaps in the material presented, as well as a substantial amount of redundant material. The emphasis is on the evaluation of cells and soluble mediators in sputum, and the book completely ignores the important field of research related to the measurement of the biophysical properties of airway secretions and sputum clearability, which limits the usefulness of this text. The authors also failed to discuss the relationship between the assessment of mediators in sputum and in other airway samples such as breath condensate.

Chapter 1 discusses techniques for sputum induction using saline inhalation. The authors summarize published guidelines, but they do not discuss alternative techniques for sputum induction such as the inhalation of other hyperosmolar agents, for example, dry powder mannitol, inhalation of ion channel modifiers such as UTP or P2Y2 activators, or the role of chest physical therapy or high-frequency chest wall oscillation. The authors state that ultrasonic nebulization is more effective for sputum induction, but they do not provide data to support that contention. They also briefly mention that salivary contamination should be avoided, but they do not discuss some of the more common techniques for reducing salivary contamination, such as the use of dental dams. Alternative methods for sputum collection, for

example, via bronchoscopy or endotracheal tube, are not mentioned. The authors discuss the use of β agonists as beneficial in preventing airway hyperresponsiveness, but they do not explain that β agonists alter the composition and properties of the secretions.

Chapter 2 gives the first of many references to the role of eosinophils in the airway. This topic is also discussed in Chapters 4, 6, and 9, with substantial content overlap. The authors adequately discuss the role of the cellular composition of secretions, but there are several errors. It is stated that lipid-laden macrophages are markers of gastroesophageal reflux, but that is only true if there is aspiration. In children it is more likely that aspiration is due to swallowing difficulties (palatopharyngeal dyskinesia) than to gastroesophageal reflux. The authors also state that a lipid index of > 7 is considered diagnostic of reflux or aspiration. That number should be 70, as indicated in Chapter 10. Also, the authors do not discuss how the eosinophil content of induced sputum can be modified if the patient is taking corticosteroids.

Chapters 4–7, which deal with specific diseases and patient populations, are well written. Further to the lack of regard for evaluation of the properties of secretions is the common mistake made in Chapter 7, where it is stated that cystic fibrosis secretions are viscous and that there is an increased amount of mucin in the cystic fibrosis airway. Both of those assertions are incorrect.

Chapter 10 is one of the most useful and well written chapters in the book. It discusses interstitial lung disease and occupational lung disease, and the micrographs are beautiful illustrations, as one would expect in an atlas.

Sputum induction is now used long-term for cystic fibrosis therapy in some parts of the world, and, to be comprehensive, a text such as this should summarize that use.

Sputum induction is an important topic, and this atlas makes an attempt at presenting the subject; unfortunately, there are many gaps and the authors failed to include critically important topics, which severely limits the value of the book. Most of the illustrations are graphs of data, and they provide limited information. The majority of the

graphs could be eliminated and discussed either in the text or in tables, leaving room for more useful micrographs, as in Chapter 10.

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One Minute Asthma: What You Need to Know, 6th edition. Thomas F Plaut MD. Amherst, Massachusetts: Pedipress. 2004. Soft-cover booklet, illustrated, 64 pages, 100 copies at 99 cents each.

Thomas F Plaut's **One Minute Asthma: What You Need To Know**, 6th edition, presents simple information on asthma management for those uninitiated in the complexities of the disease. The book is similar to other lay health texts in that it presents materials in a concise, readable form while limiting jargon and detail unnecessary for the lay reader. It begins with a brief description of the pathophysiology of asthma and links that to the effects of environmental triggers on airway inflammation. The second section concerns peak flow monitoring. The third section emphasizes the importance of symptom recognition and disease management with asthma management plans. Plaut briefly works through the familiar and the unfamiliar asthma medications in the fourth section, and he dovetails that neatly with the fifth section, which is on inhalation devices. He concludes with a very brief list of resources for further study.

Though **One Minute Asthma** is certainly not a book you can read in a minute (it took me around 30 minutes to read), it is intended as a quick study for the new asthma patient. Physicians and respiratory therapists will find it useful only as a tool for beginning a patient's asthma education. In Plaut's words, "Patients can read a few pages in your waiting room." His style is nonthreatening and intended to motivate the patient to, "work out a clear, zone-based action plan [with your doctor] for treating your asthma

at home.” He repeats messages throughout the booklet, to emphasize the benefits of control and exercise, and includes 4 folksy “Asthma Stories” intended as fables to moralize key aspects of asthma management. I am reminded of reading such proverbs in volumes of *Reader’s Digest* while waiting for a dental check-up, and I doubt this approach will connect with a younger audience more sensitized to reality television and Web-based media.

I recall meeting Dr Plaut at a recent asthma conference and being impressed by his passion and enthusiasm about the subject. He was adamant that I not just take his **One Minute Asthma** for free until I listened to his talk on asthma management. In an absurd way, I was reminded of the techniques of vendors of “miracle cures.” While I listened, I realized that his approach to education is at times so singular that he risks missing out on the contributions of others. This is evident in the very difficult set of asthma management tools he presents in **One Minute Asthma**. These tools, which outline Plaut’s own unique system for symptom scoring and asthma management planning, are difficult to read and follow. The National Asthma Education and Prevention Program expert panel *Asthma Guideline Update* report (2002) was inconclusive on the relative benefits of a symptom scoring plan versus a peak flow monitoring plan, and it recommended a written plan, negotiated between patient and provider as one means to improve asthma self-management.

What is unfortunate is that Plaut’s asthma management plan differs from all others I have seen in that the yellow zone is broken into 2 sub-zones: high yellow and low yellow. Plaut’s rationale for that is that there are times when the risk is mild (high yellow) for a patient in the yellow zone and times when the risk is moderate (low yellow), indicating a need for a different course of pre-planned action. This appears overly cumbersome and not necessarily transferable with other, simpler asthma management plans. The complexity of Plaut’s high-yellow/low-yellow system is inconsistent with the style and nature of the rest of the book.

I was similarly disappointed by the resources section. The only resource mentioned that is not a Plaut product was the National Asthma Education and Prevention Program. I find this revealing about what little Plaut may know—or have an interest in knowing—about the many valuable, time-

saving, well developed, and free products there are available to patients at other governmental, corporate, and nonprofit-agency Web sites.

Asthma prevention is a constantly evolving practice, and I salute Dr Plaut for continuing to update and improve this guide into a 6th edition. One of the booklet’s shortcomings is that some recent developments in asthma treatment do not appear in this edition, such as anti-immunoglobulin E therapies for certain patient groups, and newer combination therapies. Additionally, I did not find any rationale mentioned for the absence of information on allergy testing and other alternative and complementary therapies that patients will probably encounter.

One Minute Asthma remains a valuable, well-informed read. Plaut’s explanations are clear and concise, and the illustrations (by Carla Brennan) are well-crafted and accurate. It is fortunate that the book is pocket-sized, because practitioners can carry it with them in preparation for that “teachable moment” that becomes the one minute spent with asthma.

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Asthma: Social and Psychological Factors and Psychosomatic Syndromes. E Sherwood Brown, editor. (Advances in Psychosomatic Medicine series, volume 24, TN Wise, series editor). Basel, Switzerland: S Karger. 2003. Hard cover, illustrated, 171 pages, \$137.50.

With increasing interest in the mind/body interface, this recent book on psychobiological aspects of asthma is timely and thought-provoking. The book’s 10 chapters cover topics such as: the epidemiology of asthma; the epidemiology of comorbid anxiety and depression with asthma; psychological syndromes that mimic asthma; a historical overview of psychosomatic approaches to and models of asthma; symptom perception; adherence and behavioral change models; and an integration of family factors, individual responses to emotions and stress, and asthma outcome. Taken as a whole, the book is a refreshing critique of the reductionist and simplistic approach to asthma as a purely physiological illness that requires only med-

ications. Instead it presents the rich interplay of cognitions, behaviors, emotions, and social and environmental climate that regulate this perplexing syndrome. Readers may well find the conceptual models presented in certain chapters helpful from a clinical and teaching perspective and to organize future research questions.

The first chapter gives a good overview of the epidemiology of modern asthma. Morgan and Khan show how prevalence and mortality increased over the past 2 decades, perhaps peaking in the late 1990s, despite excellent models of pathophysiology and new and better medications. The recent improvement in those rates may be due to better understanding of some of the quality-of-life issues, including the psychosocial context in which asthma presents.

Following that introduction, Gregerson presents an organizing system, the “synchronous systems model,” whereby the patient’s illness is examined from the perspective of a “2×2” interaction: both the internal and external world; both psychological and biological approaches. To understand an individual’s asthma, one needs to look at the person’s psychological makeup, physiologic vulnerability, social environment, and physical environment. The internal physiologic system is being well researched via genetics, neurophysiologic and immune mechanisms, and medications, but the prevalence and morbidity of asthma continued to increase, leading to research on the external physical environment, such as the hygiene hypothesis. This book emphasizes the other 2 critical areas: internal psychology and external social interactions.

For example, Goodwin presents an overview of evidence for the higher prevalence of anxiety in patients with asthma and discusses some of the possible mechanisms. Zielinski and Brown discuss the inconsistencies among studies on rates of depression in patients with asthma. Though in children depression was associated with higher asthma severity, the same was not true in some of the studies of adults. They entertain the hypothesis that depression may be associated with nonadherence to medications, which would cause poorer asthma outcome, rather than having a direct effect. However, they also present several hypotheses about a shared biologic vulnerability to both depression and asthma (eg, cholinergic or neuroendocrine dysregulation). They point out that the few published studies of antidepressants for asthma patients showed improve-