Letters to the Editor

Measurement of distal airspace size

Airspace size in human lungs obviously depends on the degree to which the lung is inflated and on tissue shrinkage in preparation for histological examination. Dr D Lamb et al (October 1993;48:1012–7) minimise the latter by embedding tissue in methacrylate but appear to ignore the former. They inflated the resected lungs used in their study with 10% buffered formalin at a transpulmonary pressure of 25 cm H₂O for a minimum of 24 hours. What technique did they use and how well were the lungs inflated? Satisfactory inflation via the bronchus of surgically resected lobes has been found unsatisfactory in two Vancouver hospitals. In one, expansion had to be achieved by inflation with fixative through the pleura using a large bore needle. In another, using a technique similar to that of Lamb et al, the mean ratio of predicted lobar volume to fixed lobar volume was 0.90. More to the point, the standard deviation of this ratio was 0.03 indicating huge potential errors. How did Lamb et al correct for these when measuring airspace size (AWU)?

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Emotional aspects of asthma

With reference to the article by Drs G M Garden and J G Ayres (May 1993;48:501–5), we agree that emotional factors may contribute to the severity of asthma.

In 1982 we studied the psychosocial aspects of bronchial asthma in 37 patients. Parameters including birth order, personality traits, time and place of exacerbations, and parental attitudes were found to have a crucial role in determining the course of the patient’s symptoms. Fifteen of our patients reported emotional precipitating factors; 12 of the 37 had a premorbid hysterical personality, and seven were depressed.

The mechanisms by which emotional factors affect asthma are not understood. The cholinergic response may be important, and neural mechanisms may affect blood flow to airways, affecting the inflammatory response and smooth muscle reactivity. Although psychosocial factors play a significant part in the severity of asthma, their place may be underestimated in practice.

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BOOK NOTICES

Pharmacology of the Respiratory Tract

By Charnsarn Abotham and Peter J Barnes. (Pp 856; £195.00.) London: Marcel Dekker, 1993. 0 8247 8847 8.

The excellent long running series Lung Biology in Health and Disease from the National Institute of Health in Bethesda has reached volume 67 with this current treatise. Edited by Fan Chung and Peter Barnes, the book contains 23 chapters written by 40 scientists from Europe and North America. The first nine chapters cover basic mechanisms concerned with cell activation and cell signal transduction (for example, receptors and receptor binding, calcium and potassium channels, adhesion molecules and cytokines). Four chapters focus on individual cells (macrophage, eosinophil, neutrophil, and mast cells and basophils) but curiously the epithelial cell is omitted apart from its role in ion and water transport. Most of the remaining chapters cover specific aspects of airway function including the bronchial circulation, ion and water transport, and submucosal and goblet cell secretion. The book is concerned primarily with the basic biology of the respiratory tract and much of it describes normal rather than abnormal function. Although the title mentions clinical research the emphasis is very predominantly on experimental aspects and there is relatively little on the mechanism of action or clinical pharmacology of drugs in current use or those in development. This is not the book to turn to for advice on patient management.

At over 800 pages the book is essentially a reference book. Few, if any, will read it from cover to cover but many will want to read individual chapters or dip into it for specific items. Although I cannot vouch for all the chapters, the book has served me well in this respect over the last few weeks. Most chapters assume some knowledge of the subject and would not be easy reading for the novice. Much of the information is relevant to asthma but most aspects of airway function are discussed and some chapters are more relevant to cystic fibrosis or chronic suppurative lung disease. Some of the subjects covered have been reviewed rather frequently of late, but this book covers a wide range of topics including several that have had less exposure. A little more on the future direction of research would have been welcome.

The chapters are up to date and authoritative. In general they give what the reader wants which is an overview of the current state of the art rather than a detailed breakdown of the authors’ recent work. The book is nicely laid out, has some good figures, and a lot of references which are up to date. The book is a good investment for departments with interests ranging from basic biology of the airways to clinical pharmacology. – AET

ABC of Sleep Disorders


This book brings together 24 short chapters covering many aspects of sleep disorders, some of which are unfamiliar territory for the