Book Reviews

Asthma
A. J. Wardlaw

Unlike numerous other comprehensive books on asthma written for specialists, this book provides a general overview of both the clinical features of asthma and the basic mechanisms involved in its pathogenesis, suitable for non-asthma specialists, students and health care workers. For the specialist, it also offers a solid compendium on the major advances in asthma research in the fields of cell and molecular biology.

The first two chapters (50 pages) deal with the key clinical aspects and pathology of asthma and are aimed, not at respiratory specialists, but rather those scientists and students unfamiliar with practical clinical patient work. One striking hallmark of the book is its handbook-style text, supported by straightforward tables and clear colour illustrations which help the readers to absorb the material. A further asset is the carefully selected bibliography for each topic which concludes each chapter.

Chapters on inflammation - including principles of inflammatory response, cells and mediators - constitute the core of the book. In 80 pages, the author weaves an excellent synopsis of the phenomenal advances made in those areas which have so rapidly and deeply transformed our understanding of the basic mechanisms of asthma. He presents not only how spectacular advances in cell and molecular biology have precipitated today's progress, but also how they relate to pathologic mechanisms in asthma and allergy. The author skilfully determines key issues among a cascade of mediators and receptors in immunology while avoiding minor details or boring speculations. This section is of great value for specialists with current knowledge and, furthermore, may stimulate and extend their future clinical research work.

The following chapter presents a limited overview of the basic principles of genetics in asthma and the main benefits of that knowledge. The final chapter focuses on asthma treatment. The first section deals with conventional drugs and again is aimed at non-specialists, while the fascinating latter section suggests the major directions that therapies, and their theories, may take in the future.

The book is published as part of the Medical Perspective Series, in which Asthma has been the only certain disease among the six other titles, e.g. The Human Genome, Autoimmunity and Genetic Engineering. With this in mind, the author has accepted the demanding challenge of communicating concisely while minimizing the gap between true clinicians and basic research workers with little or no clinical experience of the disease itself. In this, he has succeeded admirably.

M. M. Nieminen

High altitude medicine and physiology
M. P. Ward, J. S. Millidge and J. B. West

This book is the second, revised edition of a well-received textbook first published in 1989. The authors have a profound knowledge of their subjects since they dispose of long-standing experience both as climbing doctors faced with medical problems at high altitude, and as distinguished scientists who have devoted much effort to research in this field.

Three initial chapters deal with the history of high altitude research, physical factors and geographical characteristics relevant to high altitude. One-half of the book is devoted to physiology. Eight excellent chapters cover ventilation, gas exchange, oxygen transport, exercise and the cardiovascular system profoundly, and thus demonstrate in which areas much research was carried out. Further chapters deal with the central nervous system, endocrinology, nutrition and some physiological aspects of high altitude populations.

The second half of the book focuses on high altitude medicine covering acute mountain sickness, high altitude pulmonary and cerebral oedema, thermoregulation, local cold injury and hypothermia. These chapters contain a thorough review of the pathophysiology besides giving clinical descriptions and principles of treatment. Regarding the distinction between acute mountain sickness and high altitude pulmonary oedema, the book is not very clear.
Many pathophysiological features which are mentioned under acute mountain sickness were actually observed in subjects with high altitude pulmonary oedema.

Further chapters of the clinical section of this book deal with accidents, mountain rescue and the risk of high altitude exposure with pre-existing disease or lack of fitness. Due to the complexity of the matter or to the sparse scientific data, this section is less profound than the other clinical chapters. The impact of research at high altitude for clinical medicine at sea level and the practicalities of field studies are discussed in the final two chapters.

Compared with the first edition, two new chapters were added, one on high altitude populations and one on skiing accidents and mountain rescue. Furthermore, the results of most of the relevant studies published into 1992 and part of 1993 were incorporated and the respective chapters updated. The extensive lists of references which follow each chapters are very valuable and rarely miss important original work. In some chapters, such as endocrinology, vascular disorders or high altitude populations, readers less familiar with the specific topics might miss summarizing statements based on a critical evaluation of the mentioned studies which often report conflicting results or examine limited aspects. A well-structured index helps to find the relevant information to specific questions rapidly. The chapters on physiology contain instructive diagrams or figures that visualize the essentials very well, while illustrations are sparse in most of the chapters.

Because of its excellent and comprehensive description of the physiological responses to hypoxia, this book will not only attract physicians going to or living at high altitude, but also those confronted with patients suffering from lack of oxygen at low altitude. In summary, it is a highly recommendable textbook for physicians and students interested in respiratory physiology or in the adjustments – as well as its limits and failures – associated with exposure to high and cold places.

P. Bäritsch