BOOK REVIEWS

Pathology of Septic Shock Current Topics in Microbiology and Immunology, volume 216

As with all multi-author books, considerable variation between the quality of the chapters and some repetition is evident. The book moves smoothly from the initial overview sections through mechanisms of action, multi-organ failure and bacterial translocation, finishing with prevention and treatment. Chapters work best when they review the literature comprehensively (as in the nitric oxide section), rather than concentrate on the authors’ own experimental data (some going as far as acknowledging the grants that supported their work). Generally the single author sections are more fluent and Brandzaeg’s overview of pathogenesis is an enjoyable read. Conversely, one wonders why it takes 22 authors to compile the chapter on endotoxin and whether this contributes to its rather fragmented style.

The book attempts to cover all causes of septic shock and includes a chapter on superantigens. Unfortunately, this is confined almost entirely to staphylococcal enterotoxin B and contains so many abbreviations that at times it appears to be written in code. No mention is made of fungal-induced sepsis.

Septic shock is a fast-moving field and inevitably dates rapidly. Nevertheless the book represent an excellent state of the art review. The role of CD14, including soluble CD14, is well described as is the importance of down-regulatory cytokines, although Th1/Th2 responses get only a passing mention.

At 210DM (c. £80) for a relatively slim volume, the book is expensive, but a worthwhile investment for anyone involved in clinical or applied research in this area. For the clinicians amongst us, it will enable us to hold our own on the ICU ward round.

R. BARNES

Toxoplasma gondii

This book presents a multi-author statement of the current knowledge of the interaction between Toxoplasma gondii and its animal or human host. The text is set out in four major sections: the genetics of the parasite population; antigens and genes of T. gondii; immune response; diagnosis and treatment. Individual chapters within each section incorporate an introduction, conclusions and references.

The strengths of the book are the comprehensive reviews of basic scientific knowledge of T. gondii written by leading authorities in specialised areas of research. Weaknesses include the uninspiring nature of the 31 figures and 14 tables which could be enhanced in both quantity and quality. For example, the complex discussions of cell types and cytokines involved in the human response to toxoplasma infection would be much easier to follow if summarised in diagrammatic form. Greater editorial control might have eliminated some of the repetition often found in multi-author texts, particularly in the introductions to each chapter. There are the frequent references to unpublished work, often from the chapter author’s own centre. The reader should recall that work might be unpublished, due to constraints of time, or unpublishable because of fundamental defect.

In general, the text represents a valuable source of reference data for the research scientists. Clinical microbiologists and physicians will find the book less useful, with the exceptions of two commendably thorough chapters, one on vaccines and the other on toxoplasmosis associated with AIDS. The overall impression is that of conscientious scientists busily trying to answer questions which, all too often, have never been posed by health carers. Whether this reflects a lack of appropriate focus amongst researchers or failure to grasp the potential of modern investigation techniques by clinicians remains to be seen.

R. HOLLIMAN

Cholera and the Ecology of Vibrio cholerae

Despite improvements in public health and water and sanitation, cholera remains one of the major global pandemic diseases. This publication brings together a number of the issues relevant to the contemporary understanding of the pathogen and the disease.

The book begins with an overview of Vibrio cholerae and the epidemiology of cholera. This chapter is a valuable introduction to the terminology used in describing the antigenic properties of V. cholerae and related species which are fundamental to the following chapters. The chapter also provides a review of the epidemiology of cholera, particularly the pattern of pandemics from the early nineteenth century to the ‘new’ pandemic caused by the O139 serotype.

The second chapter, by Professor Cook, provides a fascinating account of the social history and the early epidemiology of the disease. After describing the introduction of ‘Asiatic cholera’ into Europe early in the 19th century, there is a detailed account of the ‘Broad Street Saga’. Theories on the causation of cholera at that time ranged from the ‘electrical and ozone theory’, via various theories of ‘miasma and carbon deficiency’, to the ‘ammacular and contagious’ theories. The outbreak around the Broad Street pump is minutely described, reminding us as ever that detailed epidemiology based on careful observation is central in the understanding of infectious diseases.

The following chapter is a less satisfactory mix of history and current practice on the role of rehydration in the management of cholera. The chapter illustrates the dilemma of a volume that has an overall leaning towards the unresolved question of the association between the ecology of V. cholerae and the epidemiology of cholera (six of the 10 chapters), and attempts at the same time to be a comprehensive text.

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The following two chapters 'Intestinal immunity to V. cholerae', and 'Pathogenesis and vaccine development' are standard accounts of the present state of knowledge, although, on examining the references at the end of the two chapters, with a considerable degree of duplication.

It is from chapter six onwards that the book truly adheres to the aims of the title, and provides very detailed and valuable chapters on the complex issues surrounding the ecology of the pathogen and the epidemiology of the disease. The chapter on the aquatic reservoir of cholera reviews field and laboratory investigations that have demonstrated the persistence of V. cholerae in the environment in the absence of human cholera cases. While much of the evidence is the well documented work of Dr Colwell (Louisiana) and Dr Islam (International Centre for Diarrhoeal Diseases Research, Bangladesh), there is interesting historical data from India in the 1940s describing the persistence of V. cholerae in natural waters. The following chapter on 'Zoological microhabitats of V. cholerae' gives further evidence of the environmental reservoir of V. cholerae and concludes with recent data on the isolation of serotype 0139 from natural waters.

Chapter 8, 'The geography of cholera', is a fascinating chapter, using cholera as an example of how geographical information systems (GISs) may be applied to infectious diseases. After a general introduction to the concepts and terminology of medical geography, and a review of the effects of both ecology and development programmes on cholera, the author describes a detailed geographical study in Mozambique linking environmental and human factors to the occurrence of cholera. The chapter includes thoughts on the possible effects of global climatic change on cholera, the impact of mass refugee movements and conflict on cholera incidence, and finally the role of sophisticated satellite-based mapping systems in cholera epidemiology.

The penultimate chapter reviews data on the fate of V. cholerae in waste-water treatment systems. In those tropical areas where cholera is endemic, adequate treatment of sewage, particularly in crowded urban areas, is essential if the cycle of transmission is to be interrupted. A number of important findings are summarised in the chapter, in particular the lack of suitability of faecal coliforms as indicators of the removal of V. cholerae, the impact of just one excretor of V. cholerae on concentrations in waste water, and the variable results that have been published on the persistence of non-O1 compared to O1 serotypes.

The final chapter by Professor Drasar brings together some of the main topics linking the pathogen ecology and disease epidemiology, and considers particularly the influence of environmental factors on viability and pathogenicity. While each of the chapters individually provides both thorough reviews of their subjects and stimulating arguments for further work, the book must be considered as a collection of separate reviews rather than a definitive text, for which the reader should see the volume by Barua and Greenough, published in 1992.

This book will provide stimulating reading for all those whose work encompasses diseases of public health importance. As a reference text, it will be of value to those particularly interested in the environmental ecology of the pathogen and the disease. It provides a clear analysis of the scientific arguments and evidence linking V. cholerae in the environment and the epidemiology of cholera in communities, information which is essential if control strategies are to be implemented successfully in those areas of the tropical world where the disease remains endemic.

P. Shears

Slide Atlas of Fungal Infection – The Set

This slide atlas aims 'to complement the text of the well-established book Fungal infection – diagnosis and management'. It manages this admirably and the organisation into sections subdivided by syndromes rather than taxonomic classification enhances the clinical usefulness.

The superficial fungal infections section is comprehensive, as is the systemic infection section. The addition of CT scans of the chest in invasive aspergillosis would be useful as this is becoming the diagnostic investigation of choice. The section on subcutaneous and unusual infections may be considered esoteric by some; however, I would urge these individuals to take note of Fusarium, Scedosporium and Trichosporon infections as these are the emerging fungal problems of the next few decades.

I was delighted to have the opportunity to review this collection, and the meticulous text that accompanies each slide is enlightening. Unfortunately, at £195 for 50 slides plus explanatory text, this publication is an expensive resource. Only departments with heavy teaching commitments and limited access to clinical material will be able to justify the £4 per slide overhead.

R. Barnes