Tuberculosis

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Tuberculosis is a global public health problem which is aggravated by the emergence of multi-drug resistant strains in the wake of the HIV pandemic. It has been estimated that 20% of the world population is infected by *Mycobacterium tuberculosis*, with about 5% going on to develop clinical tuberculosis. Global mortality due to tuberculosis is of the order of 2–3 million per annum; therefore new strategies are needed urgently to combat this 'captain of the men of death'.

The appearance of this volume, which summarises current knowledge regarding the interaction of *M. tuberculosis* and the immune system of the host, is timely and the book is of value to research scientists, microbiologists and clinicians with an interest in mycobacterial diseases.

All the contributors to this volume are major authorities within this field, hence this volume represents a 'state of the art' summary, as current in mid-1996. The themes developed fall into two categories. In the initial section of the book the properties of *M. tuberculosis*, that make it resistant to immune-mediated elimination are discussed. In addition, the molecular mechanisms underlying drug resistance exhibited by *M. tuberculosis* and the molecular genetic tools available for dissecting the physiology of this organism are also discussed. Further chapters review the pathways by which *M. tuberculosis* enters, survives and replicates within mononuclear phagocytes. Virulence determinants that contribute to survival *in vivo* are analysed in a further chapter. An extremely useful chapter written by P. Andrew *et al.* discusses the mechanisms by which macrophages kill or control the growth of mycobacteria, the experimental approaches used for studying this subject and their limitations.

The second section of the book includes chapters analysing the interactions of *M. tuberculosis* with the host immune system. D. N. McMurray and I. M. Orme discuss the contribution of experimental animal models to the understanding of anti-mycobacterial immunity. P. F. Barnes and R. Modelin discuss the current views on mechanisms of human immunity to tuberculosis. Ellner *et al.* and Rook *et al.* discuss the way that infection with *M. tuberculosis* impairs the immune response of the host, thus contributing to its survival *in vivo*, and the deleterious effects of immune responses to *M. tuberculosis* which result in much of the tissue damage and ill health associated with infection with this micro-organism.

Finally, the chapter by Kaufmann *et al.* illustrates how study of the immune responses to other intracellular pathogens, like *Listeria monocytogenes*, may further our understanding of the immunology and immunopathology of mycobacterial infections.

In conclusion, this volume is a useful reference work of value to basic researchers, clinical microbiologists and physicians working in the field of mycobacterial diseases. Inevitably though, in an area where rapid scientific advances are being made, volumes such as this will become dated relatively quickly. For example, since this book was published the existence of patients with gamma-interferon receptor deficiency and defective production of IL-12, resulting in increased susceptibility to atypical mycobacterial infections have been described. Hence ideas presented within this volume may become modified rapidly or supplanted by new data.

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Case Presentations in Clinical Infections

I. K. HOSEIN and M. B. LLEWELYN, 1997. ISBN 0-7506-2184-2. Butterworth-Heinemann, Oxford. Pp. 132. £12.00 (paperback).

This slim book is a collection of 53 case presentations that cover a wide range of infections and micro-organisms. The approach used is primarily clinical and there is little microbiology. Cases are presented at random, with no initial clue as to the system involved or its possible infective cause. This presentation has the advantage that the reader addresses the cases with no preconceived ideas. Each case is followed by a small number of questions which are designed to highlight its important features and encourage the reader to think about its diagnosis, treatment, management and prevention. Answers and comments are provided for each question. Although the commentaries are for the most part quite brief, they do cover the most important features of the cases well. In addition, each case is provided with one or two references to up-to-date review articles. I found the commentaries and references very educational and useful. It is unfortunate that this book has no illustrations. I feel that some of the descriptions would have been reinforced by carefully selected pictures. The relative difficulty of most of the cases make this book unsuitable to all but the very best medical undergraduate. This book is most suited to postgraduate trainees in infectious diseases and medical microbiology.

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