Significance of medical microbiology in the care of patients


This book consists of 25 essays on medical microbiological topics, half of them new and the rest rewritten since the first edition of 5 years ago. The authors are exclusively from the USA and it is thus not surprising that the view of the subject is parochial (in the first five chapters I detected only one reference from outside the USA, and that was Canadian), though certainly not without considerable interest to the rest of the world. If only verbosity and the continuing abuse of the English language were eschewed, it would be even more useful.

The first essay, by Iseberg, defines clinical microbiology as the “domain of scientists and physicians who are detached from personal contact with patients” and reveals the schism between laboratory workers and clinicians that follows inevitably from that definition and that is so characteristic of the discipline in the USA. The next five chapters, disguised as “the speciation polemic”, discuss different aspects of the problem of identification—how far to go in relation to the time available. Nothing startling emerges, though with perseverance one can find a core of common sense. Chapters 7 to 9 concern specific groups of organisms—pseudomonas, mycobacteria, and chlamydia. The last of these chapters is particularly sensible, concluding that a diagnostic service will probably not improve patient care when the disease and treatment are relatively benign. So much for urethritis! Chapters 10 to 12 concentrate on specimens—blood, pus, and sputum. John Washington draws once again on his immense experience of 75-100 blood cultures per day, and concludes that good conventional methods are still as effective as any. Apart from a brief discussion on quantitation of organisms, the chapter on wounds is unremarkable. The last of the trio carries the vital reminder that “the laboratorian (horrors!) should never accept the totally unrealistic responsibility for deriving useful information from a bad specimen”.

After somewhat pedestrian accounts of parasitology in the USA and of emergency microbiology comes what to me was the most fascinating chapter, that on the predictive value of diagnostic tests. As the authors point out, few of us have spent much time basing our investigations on properly assessed specificity and sensitivity related to the prevalence of any given infection. The next chapter, number 16, pursues, under the totally meaningless title “A systematic means to conduct a microbiology evaluation”, the problems of accuracy of bacterial identification. It is long and often dull—oh for evidence of an editor’s blue pencil—but again has much of value.

Chapters 17 to 21 cover antibiotics. Maxwell Finland provides an interesting account of the evolution of the control of antibiotic prescribing in the USA. He concludes, of antibiotic prescribing guidelines, that there is “no definite evidence that... they are indeed cost-effective or will reduce the amount or severity of illness or will save lives”. How many outside the USA will nonetheless “take comfort in prescribing antibiotics in accordance with the best and highest standards approved by their peers”? The next chapter concerns the value of in vitro sensitivity tests in predicting clinical response to chemotherapy—a sensible account, which does not make the unbeliever’s mistake of throwing out the baby with the bathwater. Chapter 19, by Ronald N. Jones, like Finland’s, is a most useful source of background information, this time on the development of standardised sensitivity testing in the USA. One senses a welcome increase in interest in getting the answer right rather than getting the method right. The discussion on rapid methods of sensitivity testing ends with the salutary thought that empirical therapy (I would add “informed”) of serious infection, undertaken before even the most rapid method yields results, is almost always right. Chapters 20 and 21 discuss the concept of antibacterial range (MAC, MIC, MBC), and, in fine agnostic style, serum antibiotic assay.

Chapter 22 is a good if wordy account of the problems of proficiency testing in relation to
clinical microbiology. Apart from a too ready acceptance of standards as though they are god-given absolutes (is this an opportunity to use the word "data" in its true sense?), there is much food for thought. Chapters 23 and 24 are disappointing. An account of paediatric bacteriology (Chapter 23) of any profundity is probably impossible; for a variety of reasons, the gap between the laboratory and the clinician is probably at its widest here. Accounts of techniques such as ELISA (Chapter 24) are dull because they are of interest only to those who actually practice them at the bench, once the theoretical basis has been grasped. Chapter 25, on trends in organisms isolated and their antibiotic sensitivity, is a classic ending—"not with a bang but a whimper". The plain fact is that over the past decade almost nothing has changed. *Escherichia coli* and *Staphylococcus aureus* still rule despite the threats of more exciting contenders, and little of note has happened to antibiotic resistance despite ominous rumblings.

My overall feeling is that the book provides useful source material for aspirants to the membership of the Royal College of Pathologists and the like, as well as for their examiners. If it were half as long and less irritatingly insular it would behoove (sic: *OED*-obsolete except in North America) any practising clinical microbiologist to read it. As it is, perseverance with at least some of the chapters would be rewarded.

I. PHILLIPS

**Handbook of medical parasitology**


This is a paperback book with 218 pages and 334 illustrations, including 32 life-cycle diagrams. It is arranged in four sections, on protozoa, helminths, arthropods and diagnostic techniques. There is a very limited reading list of 18 items. The preface tells us that the book is written especially with students in mind and that "illustrations are the back bone of good teaching".

There is no doubt that there is a need for a book on Medical Parasitology, suitable for students and for teachers of lower level parasitology courses. One of the major problems with this book is that the black and white plates are obviously taken from the coffee-table colour atlas previously published by the senior author and have suffered greatly from being considerably reduced in size and being reproduced from colour originals. Some have lost all recognizable qualities, and the reviewer had some amusement from covering up the text and asking experts in the field to identify the more ridiculous examples. In many cases, the pathologist could not even identify the tissues. One would also have expected a textbook on parasites of man to have some pictures of patients showing the more bizarre clinical manifestations of parasitoses. On the whole, the line drawings of life-cycles are useful but occasionally are a little difficult to disentangle, especially where there is a zoonotic component in the life-cycle. The world maps with symbols showing distribution are a good idea—even if occasionally one is mislead by adventitious spots on the maps—with only occasional inaccuracies. More careful editorial work might have had the line drawings more closely associated with the relevant text.

The text represents less than half the book. Most sections start with a useful list of definitions, although the authors define a parasite in terms that cover a lion and a cow! Although little space is devoted to any one parasite the information is very clearly presented and is usually accurate. One could nit-pick through the text but this is hardly productive at this late stage; minor errors could have been identified by a suitable referee at the proof stage. Final judgement of the book must take into account the statement of the authors that the book was written "especially with students in mind". The text, whilst brief, must receive a good mark, but the half-tone figures ought to have been severely pruned so that the more useful ones could have been larger. What might put most students off is the price of the book; at £17, it is very expensive. A cheap textbook on Medical Parasitology for students is still needed.

D. A. DENHAM

**Cell wall-deficient bacteria—basic principles and clinical significance**


The difficulty and contentiousness of this subject are highlighted by the contents of this book.