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BOOK REVIEWS

Cases in Medical Microbiology and Infectious Diseases, 2nd edition

P. H. GILLIGAN, M. LYNN SMILEY and D. S. SHAPIRO. ISBN 1-55581-106-X. 1997. American Society for Microbiology. Pp. 336. £25.95.

This is the second edition of a book I reviewed some time ago. Comparing the two editions, this latest is a definite improvement on its predecessor. There are more cases and many more good quality colour illustrations. The authors have especially increased the number of illustrations relating to laboratory procedures and findings, because they recognise that laboratory courses are becoming restricted in their size and scope. The book's layout has also changed. The new edition's cases are arranged by system rather than by infecting organism type. The collection of cases for each system is preceded by a brief but informative summary of types of infection and organisms relevant to that system. In addition, there is a table summarising the features of organisms infecting that system. In common with most books of this type, each case description is followed by a number of questions and their answers. There is always a tendency to 'cheat' and turn quickly to the answers with this layout. The answers provided are very comprehensive and if the keen student is not satisfied, further references are provided with each case. Being a North American text book, some of the features of the cases have a North American slant and some would be unusual in the UK. However, this does not detract from a good collection of cases. I am never quite sure how useful undergraduates find such books as this. Most of the medical students I have asked would be happy to borrow it from a library to delve into it as light relief from reading conventional textbooks. The price would deter them from buying their own copy.

M. GILL

Tuberculosis Bacteriology: Organisation and Practice, 2nd edition

C. H. COLLINS, J. M. GRANGE and M. D. YATES. 1997. ISBN 0-7506-2458-2. Butterworth-Heinemann, Oxford. Pp. 139. £27.50.

The second edition of this text appeared last year, after its initial publication in 1985. Our laboratory copy of the first edition had been 'borrowed' some years ago, testimony to the affection in which it was held. The three authors write with a single voice, giving us their personal view on the practice of diagnostic mycobacteriology. They attempt to straddle the worlds of the well-equipped, developed-world laboratory and the less well regulated conditions encountered in many of those countries where the prevalence of tuberculosis is greatest. This produces a somewhat uncomfortable style in places and does not provide an exhaustive text for either circumstance. Nonetheless it contains a wealth of information and would be invaluable to anyone running a diagnostic mycobacteriology laboratory.

The opening chapter sets the scene with a brief overview of the history, taxonomy, epidemiology and pathogenesis of tuberculosis, touching also on some other mycobacterial diseases of importance in man.

The next three chapters cover the design, organisation and operation of the laboratory and hence the attempt to juggle the different national and international systems for the classification of pathogenic organisms becomes a little confusing. Some of the procedures, such as laboratory fumigation, are described in enough detail to make the reader aware of many of the problems, but do not attempt to offer a standard operating procedure.

The next five chapters describe laboratory practice, covering the collection of specimens, microscopy, culture, identification, drug susceptibility tests and a description of nucleic acid-based techniques.

These chapters are written entirely from a laboratory perspective with brief clinical information. Many of the observations appear to be based on personal experience and it would be helpful to know whether they are supported by a few more references. Helpful recipes for stains and media are given to support the text in all sections, and these chapters form a most useful core to the book. They also portray the rapidly changing nature of the practice of mycobacteriology, where stains originally designed by Erlich (later modified, of course, by Ziehl and Neelsen) are described alongside nucleic acid-based techniques for rapid detection of *Mycobacterium tuberculosis* in specimens, for detection of rifampicin resistance, and for epidemiological typing. These latter techniques, with others requiring sophisticated laboratory equipment and management (such as automated liquid culture systems), are described in principle, but with much less detail than conventional techniques. Readers are cautioned, rather sternly, against embracing newer methods without understanding their role fully. This is well said but slightly underplays the promise that the newer techniques offer to deal with the laboratory elements of urgent clinical problems.

The final chapter discusses the laboratory diagnosis of leprosy, a technique in which few UK laboratories now have much experience, but which still has a wide application.

G. SMITH

Current Clinical Topics in Infectious Diseases, volume 17

Edited by J. S. REMINGTON and M. N. SWARTZ. 1997. ISBN 0-86542-5752. Blackwell Science, Oxford. Pp. 348. £59.50.

This well-established series occupies a position somewhere between the specialist review journal, and the general specialist textbook. Published annually, the series provides a useful source for those who need to get to grips with a new topic quickly, or who need to update on current thinking and technological advancements. I feel that those interested in infectious diseases and microbiology look forward to dipping into the chapters of each new edition. However, they do not take the place of the specialist journal for continuing, cutting edge, education.

The 17th edition contains 15 chapters, each written by

experts in their field, reviewing a narrowly defined topic in the field of infectious diseases. There is no attempt to create an integrated textbook, each chapter stands or falls on its own account, and the reader's interest in the collection will depend on the appeal of the mix of topics contained. The authors are mostly from the USA, and the range of topics covered is wide and prosaic, with reviews of rare or emerging pathogens and infections such as *Bartonella* species, coccidioidomycosis, and norcardial infections, and more unusual aspects of the host–pathogen relationship in the chapter on *Alcohol and infection*. There are also welcome chapters on everyday problems encountered in hospitals such as coagulase-negative staphylococcal infections, and the case for once daily gentamicin dosing regimens. I found the chapter on radionucleotide imaging of bone and soft tissue infections interesting, as it covers incoming technology of radiolabelled chemotactic peptides that bind to upregulated white cell receptors at the site of infection. There is also a very useful and thorough review of uncommon gastrointestinal protozoa, some of which (microsporidia and *Isospora*, in particular) have become more commonly encountered in the AIDS era.

On the whole I find this series stimulating, educating and enjoyable to read, although the information and opinions can only be classed 'current' for a short period of a few months in these fast moving times. My criticisms are minor, and are related to the American orientation of the volume. The chapter on oral cephalosporins demonstrates how different antibiotic usage can be between the USA and the UK, and some antibiotics discussed – such as cefadroxil and lorocarbef – will be unfamiliar, as they are not widely prescribed here in the UK. Likewise the chapter covering the varicella vaccine recommends its use for vaccinating individuals aged $\geqslant$12 months, which differ fundamentally from current practice and public health policy in the UK and most European countries. The chapter reviewing once daily dosing regimens for aminoglycosides rehearses the many powerful arguments in favour of this practice, but touches only fleetingly on the practical and psychological factors (such as the reluctance of some doctors to countenance flexible dosing times) that seem to block its establishment in many hospitals in the UK.

S. G. JONES

Notes on Medical Virology, 11th edition

MORAG C. TIMBURY. ISBN 0-443-058458. Churchill Livingstone, Edinburgh. Pp. 196. £12.00.

Written in a well-structured, concise note form, and containing numerous useful tables and diagrams, this edition, like its predecessors, provides a clear, well-structured, easy to read and learn introduction to medical virology, which is particularly valuable for medical students. This 11th edition has been extensively re-structured and improved. Chapters have been modified and some even entirely re-written, tables have been updated and new tables have been inserted. Certain deficiencies found in the earlier editions have been rectified, and numerous new additions have been made, including sections on cytokines, lyssaviruses, human herpes virus-8, classification of CJD, automated laboratory technology, HIV viral load assay, new developments in antiviral therapy for a range of viruses (HIV, hepatitis B and C, respiratory syncytial virus and herpes simplex), and varicella zoster and measles prophylaxis. In addition to the changes in substance, this edition benefits from an enhanced 'new look' presentation, along with improved picture quality.

Although slightly more emphasis on patient management and prevention strategies would have been useful in view of the increasing involvement of medical virology within the clinical setting, this book remains an invaluable, straightforward, simple yet adequately comprehensive and well-illustrated source of knowledge for further generations of medical students, at a very affordable price.

D. MUIR

Molecular Genetics of Bacteria

L. SNYDER and WENDY CHAMPNESS. 1997. ISBN 1-55581-102-7. ASM Press, Washington. Pp. 504. £60.00.

This books attempts to present the fundamentals of bacterial molecular genetics. It was written as a course text for undergraduates or as background reading for those undertaking postgraduate study. While it has many of the attributes of an undergraduate textbook, it is not so basic as to only be of use to the novice. The earliest chapters are on basic molecular biology which could apply to any organism. Subsequent chapters relate to prokaryotes, although there is an inevitable bias towards *Escherichia coli*. These chapters cover in considerable depth topics such as DNA repair, gene transfer and gene regulation. The last few chapters deal conceptually with some of the techniques of molecular biology and their application.

Although this is a book on molecular genetics, it contains a substantial component of 'classical genetics'. Many of the concepts presented are illustrated by the original experiments that were fundamental to their understanding. As the illustrative experiments chosen were so clearly thought out by their originators, this approach to presenting concepts is extremely successful. It also serves as a reminder of the debt we all owe to the past.

The lay-out of each of the chapters is standardised. The diagrams provided are clear and easily understood. Coloured boxes are used to indicate key points or important examples. At the end of each chapter the authors provide 'questions for thought' and problems. The answers for these are provided. Also at the end of each chapter is a summary box and a list of key references. A glossary and comprehensive index round off the book.

I have a few criticisms. Perhaps some of the technical applications, e.g., PCR, could have had more comprehensive coverage. I also found some of the phage chapters rather heavy going. I would strongly recommend this book to any undergraduate or postgraduate student studying any bacteria in any context. Its price is good value for its contents and hard cover – the latter being necessary to protect this text from the heavy use it deserves.

M. GILL

Infection and Environment

C. KAPLAN. 1997. ISBN 0-7506-2740-9. Butterworth Heinemann, Oxford. Pp. 151. £16.99.

The potential for this book is vast. The interaction between the environment and infectious disease is well documented and often fascinating. However, although there are some

interesting nuggets of information within the book, it is ultimately a disappointing read. The layout of the chapters is inconsistent. Many have considerable detail about the organism causing the signs and symptoms, which are also described, but there is more limited information on the preventive strategies that have been used to control the infection and prevent its spread.

There is little within the general chapters on climate change, even though global warming is given as one of the key themes. Also, the impact of a much more mobile global population and the migration of large numbers of people throughout history is barely touched upon. For a book of this sort, the difficulties of comparing data of variable (or unknown) validity or reliability should have been stated. An infection might seem more common simply because it is better documented both within and between countries. The reasons why certain infections are described whilst others ignored should also be made clear. Many of the infections described are much more common outside of the British Isles. Although General Practitioners are given as potential readers, the content makes this unlikely. There are five pages on cholera, but only the briefest mentions of diphtheria, shigellosis, cryptosporidiosis, pneumococcal or meningococcal infection.

The visual appeal of this book is limited. There are no figures, tables or illustrations and only a few subheadings to break up the text. The 'page turning' appeal therefore wears off quickly. By the end, the feeling is one of a missed opportunity for what could have been a fascinating read.

A. WOOD

CMV-Related Immunopathology

Edited by M. SCHOLZ, H. F. RABENAU, H. W. DOERR and J. CINATL. ISBN 3-8055-6602-6. 1998. S. Karger, Basel. Pp. 308. DEM 326.00.

There has been a depressing tendency in the past for academic studies of human viral infections to be split into virological or immunological approaches. This no doubt reflects the background of the investigators; however, this split has hindered progress in the true understanding of the pathological processes underlying viral disease. It is therefore refreshing, that this volume, the proceedings of the First International Consensus Round Table Meeting on CMV-related immunopathology, covers the whole spectrum of CMV infection. The 22 extended reviews, all by internationally renowned workers, cover CMV-mediated immunomodulation and corresponding feedback mechanisms by which cytokines influence CMV transcription, CMV pathogenesis in bone marrow and solid organ transplant recipients, new antiviral approaches, including good summaries on CMV drug resistance, and molecular approaches to CMV diagnosis. The chapters are well written, albeit generally lacking in appropriate diagrams, and are up to date (publication within 5 months of the conference).

This monograph will appeal to clinical microbiologists, and virologists involved in the care of transplant recipients and AIDS patients, as it provides the scientific basis of antiviral drug activity, molecular diagnosis and also of possible immunopathogenic mechanisms of CMV disease and CMV-related graft rejection. In this respect, it is highly recommended.

D. PILLAY