
Book Reviews

Urinary Tract Infections. Eds. M. T. Hamilton-Miller and R. R. Bailey. Chapman & Hall Medical 1998. Pp. 350. ISBN 0 412 63050 8.

This comprehensive book gives an up-to-date view of the present situation with regard to the different aspects of urinary tract infection. The 25 chapters are written by experts in the various specialized fields and are multiply referenced. A common sense approach to management is provided.

The book starts in the most appropriate place, with a consideration of the collection of the urine specimen, its transportation and laboratory processing. The drawbacks of adhesive plastic bags for collecting urinary specimens from young children is mentioned in this chapter and also in the paediatric chapter. It may be worth emphasizing further in both places that only negative results from urine bags should be considered reliable. The interpretation of laboratory reports is discussed in detail including the definition of significant bacteriuria. In subsequent chapters, the pathology of urinary tract infection is dealt with and the clinical relevance of candidate virulence factors, such as fimbriation, capsular polysaccharides and lipopolysaccharides, is considered. Host factors and immunological aspects are also taken into account. The importance of biofilms protecting organisms from antibiotic action is acknowledged and the steps involved in their formation explained. Other notable chapters include a review of diagnostic imaging in the investigation of urinary tract infection, discussion of epidemiological issues and an informative chapter on prostatitis, a relatively under-investigated and under-reported condition.

Sensible consideration is given to the role of organisms other than the standard pathogens. We are informed that *E. coli*, *Proteus mirabilis* and *Staphylococcus saprophyticus* are the only pathogens capable of establishing infection in a normal healthy subject. Other species are considered as opportunists which require predisposing factors before they are able to initiate infection. They can be held in check by detailed attention to infection control procedures and the comment that 'handwashing is worth a thousand plasmid analyses' is well worth remembering. Handwashing is also emphasized in the useful chapter on the catheterized patient, where the importance of avoiding antibiotics when the patient is asymptomatic is also stressed. One of the editors, Professor W. Brumfitt, contributes a chapter of the

problems of the urethral syndrome, commenting that approximately 25% of women have at least one episode of dysuria and frequency a year and that there is still no agreement about the aetiology of this common and distressing condition. He concludes that it probably consists of a number of different clinical entities and regrettably, it still results in a great deal of morbidity and frequently in the unnecessary use of antibiotics.

The problems of different age groups are discussed, as well as management during pregnancy. The chapter on paediatric urinary infections is detailed and gives a useful summary of management, including assessment, therapy and follow-up. It would have been helpful to have more information on the length of prophylactic treatment advisable in the various paediatric groups and there was no discussion of the possible increased likelihood of urinary tract infection occurring in male infants under 3 months of age. The chapter on the elderly is also of interest and the author points out that infection occurs in 1% of the population every decade up to 65 years of age and thereafter more rapidly. The frequency of asymptomatic bacteriuria and its clinical relevance in this age group is considered.

The chapter on cost control is timely and relevant. It is of interest that this aspect contrasts with comments in a previous chapter that financial stringency may make it impossible to obtain comprehensive identification of organisms. This limits detailed knowledge that could be useful in the characterization of infection. The overview of therapy given in a later chapter is helpful and the final chapter looks in detail at antimicrobial pharmacokinetics. It is noticeable that cotrimoxazole is mentioned throughout this book, even though it is rarely recommended in the UK these days because of the risk of serious side effects in some patients.

There are still many unanswered questions and many of the chapters end with a request for further research for this common but often debilitating and sometimes serious condition. A comment is made that virtually every person, if he/she lives long enough, will develop a urinary tract infection at some time. As a result, it is likely that a large number of doctors in a variety of fields will be interested in reading this informative, throughout provoking and authoritative book.

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Mycobacteria Protocols. (Methods in Molecular Biology, vol. 101.) Eds. T. Parish and N. G. Stoker. Humana Press 1998. Pp. 472. ISBN 0 89603 471 2.

Mycobacteria are widely found throughout the world and the importance of some species as human pathogens has recently been emphasized by their interaction with HIV infection and with the emergence of multi-drug resistant strains of tuberculosis. Much has still to be discerned about the biology of these organisms and the pathogenesis of mycobacterial infection. Progress in this area has been slower than for other bacteria, in part due to the technical difficulties encountered when working with mycobacteria such as slow growth rates and the highly resistant structure of the cell wall. However, in recent years advances made in the field of molecular biology that have enabled considerable progress to be made. The availability of data from the genome sequencing projects will further enhance this now rapidly moving area of research. These advances in technology have also had a wider impact with the development of novel rapid diagnostic methods and techniques for epidemiological studies.

This book provides a thorough guide to many of the techniques used in the modern mycobacterial research laboratory. Comprehensive treatment of the subject includes not only investigations of a molecular nature but also the basic microbiological methodology required for manipulation of these organisms. Techniques dealt with in depth include the extraction and purification of macromolecules, the manipulation of nucleic acids and the introduction of DNA into mycobacteria. Several tools for studying gene

expression are included along with a chapter on the use of a database for integration and analysis of the rapidly expanding body of data available. The chapters have each been produced by experts working in the field and the detailed descriptions of the methods contained will be of considerable assistance to anyone planning to embark on work of this nature.

Of interest to the routine laboratory are the chapters on identification and speciation of mycobacteria. While new molecular methods are clearly introduced the currently used microbiological and biochemical methods are also well presented. The chapter on computer analysis of DNA fingerprinting offers a useful introduction to the methods currently used for epidemiological studies of tuberculosis and the chapter on spoligotyping provides a good technical background on this promising new technique. Less comprehensive is the treatment of new methods of diagnosis of tuberculosis; while space has been given to novel techniques still awaiting independent evaluation recently introduced commercially available nucleic acid amplification techniques for diagnosis and drug susceptibility testing receive scant attention.

The depth and comprehensive nature of this book make it an excellent reference source for anyone wishing to stay abreast of world of mycobacterial research. Although it is clearly aimed at those working in the research laboratory it will also prove a valuable resource for anyone wanting to broaden their knowledge of mycobacteria.

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