The Antimicrobial Drugs, Second Edition

by Eric Scholar and William Pratt

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This comprehensive textbook is an excellent reference source for in-depth information about antimicrobial agents. Although a text as comprehensive as this may benefit students, a more general pharmacology text is likely to have most of the information that they need at their level of training. The authors assume that the readers have a general knowledge of pharmacokinetics. The detailed information, thorough discussion of important topics, and large number of references make this reference book useful for physicians and clinical pharmacists, regardless of whether they are generalists or specialists, who treat patients who have infectious diseases.

The subject matter is divided into 5 parts: 1 section devoted to the principles of antimicrobial therapy, and 4 other sections about antibacterial, antifungal, antiparasitic, and antiviral agents. The 2 chapters on principles of therapy concern determinants of bacterial response to antimicrobial agents and drug resistance. Key topics related to the microbiology of infectious diseases, the empirical and prophylactic use of antimicrobial agents, and the host factors that affect the choice of therapy are succinctly reviewed, although, curiously, the pharmacodynamics of antimicrobial action are not mentioned—one of the book’s few substantive omissions. The chapter on resistance provides a good overview of general mechanisms and genetics, although the molecular details are obscured at times by the authors’ reliance on dated information and the book’s brevity of description. More-specific information concerning resistance for each of the drug classes is provided in the relevant chapters.

Nine chapters are devoted to antibacterial agents, which are organized logically on the basis of the agents’ mechanism of action (e.g., cell wall synthesis inhibitors, protein synthesis inhibitors, fluoroquinolones) or use (e.g., antimi- cobacterial agents). The authors do an excellent job of reviewing the pharmacology, mechanisms of action, specifics of resistance mechanisms, metabolism and excretion, important drug interactions, and toxicity for each of the drug classes. The discussions are thorough and lucid. Numerous tables, figures, and references nicely complement the text. The classification of β-lactamas is confusing, as it often is, because the authors rely on an older scheme based on biochemical characteristics; they don’t mention the Ambler system, which is based on molecular similarities and differences.

Because the authors provide only very general information about the antimicrobial spectrum and the therapeutic use of specific agents and classes of agents, the reader who is interested in a detailed discussion of chemotherapeutics would have to look elsewhere. Information about newer agents is limited in some cases (e.g., for quinupristin/dalfopristin and is absent in others (e.g., for linezolid and some of the newer fluoroquinolones), an unavoidable consequence of publication deadlines.

The chapters on antifungal, antiparasitic, and antiviral drugs, which constitute approximately half of the entire text, are as comprehensive as those on antibacterial agents. The same attention has been given to the inclusion of helpful figures and summary tables, and the text is extensively referenced. The 2 chapters on the use of chemotherapy for viral infections, 1 of which is dedicated entirely to antiretroviral agents, are excellent. The textual material provides a handy and authoritative reference for practitioners, many of whom will be unfamiliar with this expanding class of agents. All but the most recently introduced agents are discussed.

Given the rate at which new information is generated, the chapter on antiretroviral agents is outstanding. The site of action of the various drug classes is reviewed. The discussions of viral replication and resistance, which must, by necessity, be limited in detail, provide an excellent conceptual framework for understanding the timing of antiretroviral therapy and treatment strategies, although the specific details will change as newer, more-potent agents become available. Thankfully, the authors provide 3 tables to help the practitioner who struggles to deal with toxicity and the numerous drug interactions that occur among antiretroviral agents and other drugs.

This textbook brings together a large body of information from a variety of sources and fields into a comprehensive and authoritative reference work on antimicrobial drugs. Numerous tables and figures and over 3800 references complement the written material. This textbook is recommended as an excellent resource for the generalist or specialist who is engaged in the treatment of infectious diseases.

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