Human Diseases From Wildlife

Human Diseases From Wildlife, authored by Michael Conover and Rosanna Vail, comprises 30 chapters, each describing a zoonotic disease involving a wildlife host or vector, with a focus on diseases that occur in North America. This book would be useful to all who encounter zoonotic diseases in the course of their practice and may need a quick, but thorough, compilation of relevant information and resources for zoonoses, whether caused by viruses, bacteria, parasites, or fungi. There is even a chapter on prion diseases, although the only known prion disease of wildlife (chronic wasting disease in cervids) has not been recognized to cause human illness (and the authors clearly state this).

Each chapter is organized similarly, with an introduction to the disease, its history, and the causative agent; symptoms in humans; symptoms in animals; how humans contract the disease; treatment; how to reduce risk for humans; and potential for eradication. This consistency facilitates the reader’s digestion of an abundance of material. The authors avoid particularly technical aspects of the material, yet present the information without “dumbing it down.” All of the cited references are included at the end of each chapter to direct the interested reader to more in-depth examination of any one aspect of the disease.

The book is current and highlights recent cases, outbreaks, and guidance documents. For instance, the chapter on influenza allows the reader to quickly review the basics regarding influenza virology and influenza pandemics through history. Because the book’s focus is on zoonotic diseases associated with wildlife, there is a nice compilation of zoonotic influenza transmission events up to, and including, the H7N9 cases in China in 2013. The section on how people can reduce their risk of influenza infection includes not only basic prevention messages (eg, get annual flu vaccinations, stay at home if sick, practice good cough and hand hygiene, wear appropriate personal protective equipment if exposed to birds infected with avian influenza), but also includes important messages—for example, that properly cooked eggs and meat do not present a risk of influenza transmission.

The authors use sidebars throughout the text to add interest by highlighting representative and relevant cases and situations. The chapter on rabies includes summaries of 2 human cases of rabies associated with the bat variant of the rabies virus (ie, the variant that has resulted in the majority of domestically acquired rabies infections in humans in the United States); a synopsis describing the patient who survived rabies; and a cautionary tale illustrating how translocating rabies vector species (in this case, raccoons) ultimately resulted in the raccoon rabies epizootic on the Eastern seaboard of the United States.

The 4 appendices also contain valuable information. Because the book is intended for a broad audience, Appendix A provides definitions of medical terms used in the book; Appendix B lists the scientific names for vertebrate and invertebrate species mentioned in this book by common name; Appendix C provides black and white images of the most common vectors and their corresponding distribution maps (although these are not entirely easy to see in the black and white format, it is convenient to have them presented together); and Appendix D provides a quick reference for all of the covered diseases, including the primary animals involved, the geographic distribution, the main mode of human infection, and the number of reported cases in the United States in 2011. It would have been helpful to have another appendix with a list of all covered species and the diseases that are associated with each species. This would have allowed readers to quickly appreciate the various disease risks presented by an encounter with a particular species.

In the preface, the authors explicitly state that they have tried to avoid medical terminology and seem to suggest that anyone who is fascinated by zoonoses will enjoy reading the book, but it is not entirely clear who the intended audience is. In a discussion about “One Health” in the introduction, the authors refer to the diverse scientific disciplines that are relevant to the study of zoonoses, specifically medical science, veterinary science, bacteriology, virology, epidemiology, entomology, biology, psychology, and sociology. The authors succeed in presenting material that is relevant, useful, understandable, and enjoyable to practitioners of all of these, and likely other, disciplines.

Note
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