Cases in Human Parasitology
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WASHINGTON, D.C.
To my family, including my husband, Jack; my daughter, son-in-law, and granddaughters, Stephanie, Brian, Emma, and Julia; and my son and daughter-in-law, John and Beth; and to the memory of my father, Francis J. Stephenson, whose support and encouragement have always been my inspiration.
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Introduction

Parasites have been responsible for considerable morbidity and mortality throughout the ages worldwide, but today they are a problem mainly in developing countries. Although parasitic infections have a particularly strong impact on immunocompromised populations, many immunocompetent individuals also suffer from these illnesses.

Although some parasites are endemic to the United States, globalization has created considerable opportunities for infected travelers to bring back parasites from foreign countries. This book was written to provide examples of a variety of situations in which parasites are suspected of causing an infectious disease. In addition to infections caused by well-known parasites, as well as new and emerging parasites, *Cases in Human Parasitology* provides cases infrequently seen in this country to alert the reader that such uncommon infections may have been imported from elsewhere.

Previously written textbooks containing cases in microbiology and infectious diseases (P. H. Gilligan et al., *Cases in Medical Microbiology and Infectious Diseases* [American Society for Microbiology, Washington, D.C., 1992, 1997, 2003]) have proven to be successful in their efforts to provide an enjoyable and challenging educational tool for the reader. The purpose of *Cases in Human Parasitology* is to present cases solely involving parasites to supplement conventional textbooks in human parasitology and to provide an interesting and educational challenge to health care scientists. I was inspired to write the text for those individuals taking college or medical school courses in parasitology, for those being trained in hospitals in this field, and for those performing parasitology work in clinical laboratories, analyzing specimens to detect and identify parasites causing human disease.

The book is designed to stimulate discussion and to challenge students while emphasizing the relationship of diagnosis to patient care. It is hoped that the reader will learn to recognize the symptoms of parasitic diseases, to correlate the patient’s history (travel, etc.) and symptoms to order laboratory procedures, and to guide treatment.
The book contains 62 cases of patients presenting to emergency departments or to their physicians with symptoms of a parasitic disease. The reader must develop a differential diagnosis and decide whether or not the patient is infected with a protozoan or helminth (worm). Most cases are accompanied by a color image(s) of the parasite causing the infection.

The book is divided into five sections, each dealing with a different group of parasites: intestinal protozoa (section I), blood and tissue protozoa (section II), cestodes, trematodes, and intestinal nematodes (section III), blood and tissue nematodes (section IV), and challenging cases (section V). The section entitled “Challenging Cases” covers nonparasitic infections in patients with symptoms closely resembling, and often confused with, those of parasitic infections.

At the beginning of each section is an introduction, which provides background information relating to the cases presented in that section. The introduction includes a brief discussion of parasites in that section, providing the reader with some clues to the etiology of those infections. Each case begins with the patient’s history and symptoms. Travel history, residence, the age of the patient, seasonality, and eating habits are important in leading to the correct diagnosis and should be carefully noted. Relevant clinical findings and laboratory data are presented. The reader is asked to consider the differential diagnosis and is asked a number of questions about topics such as the following:

- the diagnosis of the illness
- the name of the parasite
- the life cycle of the parasite
- treatment, transmission, and prevention of the illness
- the epidemiology of the infection
- relevant clinical findings
- other parasites to consider in the differential diagnosis

Answers to the questions are provided at the end of each case presentation. A glossary and a list of figures are provided after section V.

The book may be used as an educational tool for educators in colleges and universities to reinforce didactic material taught in the classroom in courses in microbiology and parasitology in departments of microbiology or medical technology (clinical laboratory science); in hospital training programs in medical technology (clinical laboratory science); in programs in continuing medical education, to maintain the competence of clinical laboratory scientists doing parasitology work in clinical microbiology diagnostic laboratories and to satisfy regulatory requirements for various licensing boards; to train pathology residents and infectious disease fellows during their microbiology rotations, as well as to provide an educational tool for pathology residents preparing for board exams; and to teach first-year medical students taking courses in medical microbiology or infectious diseases and for medical students preparing for board exams. Many medical schools are currently using a case-based approach in their curriculum and have found that this method has been proven to be effective in other areas of medicine.
Acknowledgments

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Many of the illustrations were produced with the assistance of Stanley Schwartz of the Department of Pathology at the Memorial Hospital of Rhode Island. I thank him for his help. These images would not have been possible without his expertise.
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