

Research and Reviews in Clinical Microbiology: Parasitology - A Book Review

Venkataramana Kandi*

Associate Professor of Microbiology, Member Asian Council for Science Editors (ASCE), Prathima Institute of Medical Sciences, Karimnagar, Telangana, India

***Corresponding Author:** Venkataramana Kandi, Associate Professor of Microbiology, Member Asian Council for Science Editors (ASCE), Prathima Institute of Medical Sciences, Karimnagar, Telangana, India.

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Abstract

Clinical microbiology is a vast subject that covers a wide range of sub categories that include clinical bacteriology, clinical virology, clinical mycology, and clinical parasitology. The present book is a systematic compilation of both research and review pieces related to the field of clinical/medical parasitology.

Keywords: Clinical Microbiology; Clinical Parasitology; Parasitology

Book Review

This book is a systematic compilation of scientific communications related to the field of clinical/medical parasitology. The contents of the book are all extensively peer-reviewed and therefore will have least errors. The book has a total of eleven chapters covering a wide range of parasitic diseases. The first chapter deals with the parasitic causes of diarrhoea among human immunodeficiency virus (HIV) infected patients. The specific parasitic infestation was correlated with the T CD4+ counts. It also confirms that the patients who were infected with coccidian parasites like the *Cryptosporidium*, *Cystoisospora*, and *Cyclospora* had TCD4+ cells (365 ± 86 cells/mm³) as compared to those infected by other protozoan (468 ± 40 cells/mm³), helminthic (429 ± 190 cells/mm³) and mixed parasite infestations (312 ± 65 cells/mm³) respectively.

Chapter two reviews the status and effects of intestinal parasitic infectious diseases (IPI). It attributes the burden of IPI's to the poverty, hygiene, and malnutrition. Also, it emphasizes the effect of parasite burden on the disability adjusted life years (DALY) and the resultant financial burden. Chapter also stresses on the importance of parasitic infestations during pregnancy and its complications that include low-birth weight and intrauterine growth retardation. It finally suggests the significance of thorough epidemiological surveillance.

In chapter three, the author reviews the most neglected aspect of clinical/medical parasitology, the human myiasis. Myiasis, is the infestation of fly larvae, mostly accidentally, in human beings resulting in clinical illness. This chapter presents the most common fly larvae responsible for human myiasis and the importance of epidemiological studies and predisposing factors for fly larval infestation. It also delineates the clinical features of different types of human myiasis and the laboratory identification of fly larvae.

Chapters four and five reviews the effect of human myiasis among paediatric population. The chapter five presents a rare case of two siblings of a same family being infested by fly larvae and resulting in chronic intestinal infection. In this chapter, the author presents a confirmed case of human myiasis caused by *Musca domestica*. All the pictures (from the larva, pupa to the adult), and procedures for the identification of the fly larvae are clearly presented.

In chapter six, the author reviews the role of human strongyloidiasis. It clearly presents the prevalence of human strongyloidiasis along with the life cycle, predisposing factors, pathophysiology, laboratory diagnosis and prophylaxis. A well labelled picture of rhabditiform larvae of the *Strongyloides stercoralis* is also shown, which could be helpful in the parasite identification in a stool sample during screening.

Chapter seven stresses on the importance of correct identification of the larvae that may be found in the stool. Although, it is only the *Strongyloides stercoralis* larvae that is seen in a freshly passed stool, a delay in the transport and processing of stool specimens may also reveal the larval forms of other parasites that include hatched out larvae of *Ancylostoma duodenale*. A well labelled picture of rhabditiform larvae of the *Strongyloides stercoralis* is also shown, which can be used to differentiate it from *Ancylostoma duodenale*.

Chapter eight throws light on the improved laboratory methods for the identification of amoebiasis caused by *Entamoeba histolytica*. Considering the fact that there are amoebae similar to *E. histolytica*, like the *E. dispar*, which is non-pathogenic, it is important to confirm the identity before initiating the anti-amoebic therapy.

In the chapter nine, the author presents a very rare case of human diphyllbothriasis in a nine-year old child in India. It presents only the fourth case from India. Image of the operculated and bile-stained eggs of *Diphyllbothrium* species along with the picture of the adult worm showing the scolex, and broader than long segments/proglottids is presented, which could be helpful for the readers in identifying the parasite.

Chapter ten presents a rare case of human dypilidiasis. The infection, which is transmitted by contaminated food and water with the eggs of *Dipylidium caninum*, usually happens in children. The case is supported by the images of the cluster eggs, and the adult worm showing the longer than broad segments with each segment resembling a cucumber seed. Images will be important to the readers during parasite identification.

Chapter eleven reviews a case of scabies caused by the mite *Sarcoptes scabiei*. Beautiful picture of the mite observed under the skin of the infected patient along with a video demonstrating the live and mobile mites with in the skin, as observed using a simple saline mount are a highlight to this chapter (<https://www.youtube.com/watch?v=YNmKKOTd-fs&t=47s>). This simple saline mount to easily identify the mite in the infected skin, suggested by the author has also been recommended internationally as evident from a paper published in the prestigious journal, The journal of parasitology published by the American society of parasitologists [1,2].

Bibliography

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