

Thomas C. Orihel, Lawrence R. Ash: **Parasites in Human Tissues.** American Society of Clinical Pathologists Press, Chicago, IL, 1995, 386 pp., 107 colour plates.

One of the most difficult aspects of diagnosis of parasites is the identification of organisms within tissues. There has been a lack of comprehensive books in this area, although some information can be found in general parasitological and pathological books. *Parasites in Human Tissues* addresses this deficiency and provides an diagnostic tool for the identification of parasitic agents in tissue sections.

The authors are well known from their previous, *Atlas of Human Parasitology*, a comprehensive aid to the identification of parasites in faeces, blood and urine. To complement this guide with parasites from human tissues, in this book they combined text with an atlas containing beautiful colour images, which illustrate the diagnostic features of medically significant protozoa, helminths, arthropods, and pentastomatids using 107 colour plates with more than 700 individual micrographs. With the exception of 23 clinical images and several micrographs of predominately recently emerging parasites, all other images are originals prepared by the authors using slides from personal collections, the collection accumulated by Paul C. Beaver and from many contributors from around the world. The book begins with an introductory chapter which explains how to use the volume. Four valuable and comprehensive tables follow, for use as a quick reference to the location of parasites in human tissues.

The book has sections on Protozoa, Nematoda, Trematoda, Cestoda, Acanthocephala, pseudoparasites, Pentastoma, Arthropods, and artefacts. Each major section in the book begins with a very brief discussion of taxonomic relationships, general morphology and differential features of the group. This is followed by brief information of the biology, life cycle, pathology, clinical manifestations and morphology of each organism, accompanied by clinical photographs or stained

preparations and histological illustrations. Although most illustrations are from specimens stained with hematoxylin-eosin, photomicrographs of tissues stained with other staining methods (e.g. trichrome, Giemsa, Gram, and periodic acid-Schiff) are used when they are diagnostically helpful. The morphological features of several protozoan agents are shown using immunofluorescence, transmission and scanning electron microscopy. For the helminths, there are, multiple sections at different levels of the body.

The descriptions of the host reaction in this book are not as detailed as some pathologists would like. The authors' purpose was to provide microscopic descriptions of the parasites, not the pathology. Most micrographs, however, clearly illustrate the features associated with histopathology induced by the parasite and legends for each image with histopathological descriptions would have been very useful.

Most parasitologists will appreciate the excellent information about many opportunistic pathogens and during newly emergent causative agents of parasitic infections whose tissue stages have been described recently or are partially unknown, including microsporidia (*Encephalitozoon* spp., *Enterocytozoon bieneusi*, *Nosema* sp., *Pleistophora* sp.), leptomyxid amoebae (*Balamuthia mandrillaris*) and coccidia (*Neospora caninum*). Although *Pneumocystis carinii* is now considered to be a primitive fungus rather than a parasite, this organism is still included in the book. Helminthologists will be pleased by the pictures of helminths infecting animals or free-living, that can be found in human tissues very rarely.

As with the earlier atlas, this book is printed on high quality paper, finely bound, and has a pleasing appearance. The authors must be congratulated on their contribution to the parasitological literature.

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