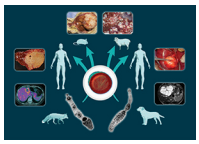
AMERICAN SOCIETY FOR MICROBIOLOGY | Clinical Microbiology Reviews®

CONTENTS • APRIL 2019 • VOLUME 32, NO. 2

COVER IMAGE



Cover photograph: Echinococcosis, a neglected zoonotic disease, is caused by cestodes (tapeworms) of the genus *Echinococcus* and remains a serious public health concern globally. There are two main species of clinical relevance: *Echinococcus granulosus sensu lato* (causing cystic echinococcosis [CE]) and *Echinococcus multilocularis* (causing alveolar echinococcosis [AE]). The image illustrates some aspects of the life cycle of *E. granulosus* (right side of the image) and *E. multilocularis* (left side of the image) and the pathology and diagnosis of CE and AE. The *Echinococcus* egg is shown as the centerpiece of the illustration, as it is the stage of the life cycle that is released in the feces of a carnivorous definitive host into the external environment and is ingested by and infects a human or herbivorous intermediate host (sheep and other domestic ungulates for CE and rodents and lagomorphs for AE). Eggs hatch in the gut, releasing oncospheres, which pass through the portal and lymphatic vessels, reaching the liver or, less frequently, other organs such as the lungs or brain, where they localize and develop into metacestode larvae. When protoscoleces, produced asexually within the metacestode, are ingested by a definitive host, they develop into mature, egg-producing adult worms. Medical imaging is key to the clinical diagnosis of echinococcosis. On the right side, a CE2 hydatid cyst with daughter cysts as assessed using magnetic resonance imaging is shown, and on the left side, an active alveolar echinococcosis lesion as assessed using positron emission tomography combined with computed tomography is shown. (Concept by Hao Wen, Lucine Vuitton, Tuerhongjiang Tuxun, Jun Li, Dominique A. Vuitton, Wenbao Zhang, and Donald P. McManus; design by Wenbao Zhang; illustration finalized by Madeleine Flynn.) *(See related article at e00075-18.)*

REVIEWS

Instructions to Authors are available on the journal website.