Images in Clinical Tropical Medicine

Hydatid Disease of the Knee Joint: Osseous and Extraosseous Involvement

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A 37-year-old woman living in an underdeveloped village had complained of a slow growing mass in her right knee region, which caused limping and some pain. Her abdominal ultrasonography and chest radiography examinations were normal. Plain radiography of the right knee showed multiple osteolytic lesions, sclerotic areas, cortical thinning, and irregularities in the right proximal tibia (Figure 1). There was no calcification in the soft tissues. Computed tomography (CT) scans showed multiple non-enhancing low-density lacunas and cystic lesions in the para-osseous soft tissues (Figure 2). It was also seen that the lesions eroded the subchondral bone. A magnetic resonance image (MRI) was complementary to CT for evaluating local extension. Lesions appeared as thin-walled fluid-filled structures, hypointense on T1-weighted images and moderately hyperintense on T2-weighted images (Figure 3A and B). She had two operations because of hydatid disease caused by echinococcus granulosus, 2 and 6 years ago, in the same region. Because of her history and her present laboratory and radiologic findings, the patient was diagnosed with recurrence of hydatid disease. Amputation and chemotherapy were suggested, but the patient refused surgery and other therapy suggestions.

Isolated musculoskeletal lesions of cystic echinococcosis are uncommon. Usually they are found with concomitant
hepatic or pulmonary involvement in patients living in endemic areas. The location of echinococcus granulosus in the tibia is only described in a few cases. These case reports emphasize the importance of considering osseous hydatidosis in the differential diagnosis of destructive bone lesions.

Imaging features of musculoskeletal hydatid disease on X-ray or CT are similar to those of tuberculosis, metastases, and giant cell tumors or bone cysts. MRI shows distinctive diagnostic features of bone hydatid disease. However, sometimes it is not possible to differentiate hydatid cyst appearance from malignancy.

Received May 1, 2009. Accepted for publication May 23, 2009.

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