A primary hydatid cyst of the gracilis: a case report

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ABSTRACT

Primary hydatid disease of the skeletal muscle without systemic involvement is rare. A 40-year-old woman presented with a painful mass in her medial left upper thigh. She was misdiagnosed as having a deep intramuscular abscess and a fine needle aspiration was performed, but the fluid came out crystal clear. Further inquiry revealed that her 16-year-old daughter had been operated on twice for liver and lung hydatid disease. Thus, a provisional diagnosis of hydatid disease was made. An echinococcal haemagglutination test was positive. Ultrasonography and magnetic resonance imaging findings were consistent with a type-2 hydatid cyst showing a ‘water-lily’ sign. The cystic mass within the left gracilis was resected en bloc. Adjunctive albendazole chemotherapy (400 mg/day) was prescribed for 3 months. At the 22-month follow-up, the patient remained free of symptoms.

Keywords: albendazole; echinococcosis; magnetic resonance imaging; ultrasonography

INTRODUCTION

Hydatid cysts are usually found in the liver and lungs, but can affect any part of the body. Although a primary hydatid cyst involving the musculoskeletal system is rare, it should be included in the differential diagnosis for any cystic soft tissue mass found in patients from areas where the disease is endemic.

CASE REPORT

In April 2005, a 40-year-old woman presented with a 2-week history of a painful mass on her medial left upper thigh. On physical examination, a large, tender, and slightly mobile mass was palpated, with hyperaemia and rubor on the overlying skin. Plain radiographs were normal. She was misdiagnosed as having a deep intramuscular abscess and fine needle aspiration was performed, but the fluid was crystal clear. Further inquiry revealed that her 16-year-old daughter had been operated on twice for liver and lung hydatid disease, so a provisional diagnosis of hydatid disease was made. The echinococcal haemagglutination test (IHA) was found to be positive and ultrasonography revealed a hypoechoic cystic
mass with echogenic septations. Magnetic resonance imaging (MRI) demonstrated an 8x8x5 cm soft tissue cystic lesion in the gracilis. The coronal T1-weighted MRI showed a hypointense mass with a lower intensity core; sagittal and axial T2-weighted MRI showed a high signal intensity mass surrounded by a hypodense rim (Fig). Serpiginous low intensity septate-like structures were present within the mass. These findings were consistent with a type-2 hydatid cyst showing a ‘water-lily’ sign. Further investigations ruled out coexistent hydatid disease in other organs. The entire cystic mass was excised and histopathologic examination of the specimen confirmed the diagnosis. Adjunctive albendazole chemotherapy (400 mg/day) was prescribed for 3 months. At the 22-month follow-up, the patient remained free of symptoms.

DISCUSSION

Isolated primary hydatid disease of the skeletal muscle is rare, as the parasite has to cross pulmonary and hepatic barriers to reach the muscles. The high lactic acid level in muscle tissue is considered unfavourable for parasite survival. Moreover, muscular contractions prevent fixation of larvae to the tissue.

Ultrasonography should be the first diagnostic tool used for detection of hydatid disease of soft tissue. When the disease progresses, MRI is best for clear identification of involved structures and for surgical planning. It is also an effective means of making a differential diagnosis. Hydatid cysts are classified into 4 types and these can be determined by any imaging modality. In the present case, the pericyst was detected by ultrasonography and the pathognomonic ‘water-lily’ sign (type-2 hydatid cyst) was detected by MRI.

Serologic tests are valuable when they are positive, but half of the primary intramuscular hydatidosis cases give a false negative. The IHA sensitivity rate has been reported as 67%. Although serology tests like IHA can help make the diagnosis, complete reliance on them is not recommended.

En bloc resection alone is curative for intramuscular hydatid disease. In our patient, adjunctive chemotherapy was prescribed to eliminate any possible larvae disseminated by the needle aspiration. The patient remained free of symptoms at the 22-month follow-up and had no evidence of recurrence.

Primary hydatid disease involving the gracilis has been reported. Although hydatidosis is endemic in Turkey, this patient was misdiagnosed as having an abscess and underwent fine needle aspiration, which is contra-indicated in hydatid disease.

Ultrasonography and serologic tests should be performed before any invasive procedure.

REFERENCES


