A minimally invasive treatment option in primary muscular hydatid cyst: report of 2 cases

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Primary involvement of muscles is very rare in cases of hydatid cyst; it has been reported in about 2%–3% of all patients.[1] In this presentation, we discuss the clinical and therapeutic aspects of hydatid cyst observed in muscles.

Case 1

A 37-year-old woman was admitted to our hospital. According to the patient, her symptoms had existed for 3 months. On physical examination, a well-circumscribed, soft, semimobile mass 10 × 8 cm in diameter was palpable on the left posterior thigh. Laboratory findings were within normal ranges, except that the indirect hemagglutination test for echinococcosis showed a titre of 1:1200. A titre > 1:320 is considered a positive result in this method.

MRI revealed a multiloculated cystic mass measuring 10 × 16 × 10 cm on the left thigh that reached to the medial part of the head of the biceps femoris muscle (Fig. 1). Thoraco-abdominopelvic CT revealed no other abnormal findings. In the treatment procedure, we initially made a 5-cm vertical skin incision and reached the pericystic wall. Then, the cystic cavity was irrigated for 10 minutes with a scolicidal agent (1.5% cetrimide–0.15% chlorhexidine [10% Savlon])[2] to prevent possible muscle contamination after the aspiration of the clear fluid. After irrigation, a partially pericystectomy and cyst drainage was performed.

Histopathological examination supported a diagnosis of cystic hydatid disease. After an uneventful recovery, the patient was treated with an average dosage of 10–12 $mg/kg^{-1}/day^{-1}$ of albendazole for 3 months, which might have contributed to preventing recurrence, as reported by the Bulletin of the WHO working group.[3]

Case 2

A 17-year-old adolescent girl was admitted to our hospital. According to the patient, her symptoms had existed for 6 months and growth was slow. On physical examination, a well circumscribed, semisolid, semimobile soft mass 9 × 10 cm in diameter was found on her left shoulder (Fig. 2). Laboratory results were similar to those in case 1.

MRI detected a lobulated cystic mass of about 5 × 11 × 6 cm, with irregular contours, between the left scapula and the ribs. Again, thoraco-abdominopelvic CT revealed no other abnormalities. We performed the same treatment procedure as described in case 1. As in case 1, histopathological examination supported a diagnosis of cystic hydatid disease.

The first-year follow-up of these 2 cases was uneventful. We did not observe recurrent disease.

Discussion

Primary muscular hydatid cyst is a very rare clinical condition. A routine histopathological examination of the disease usually shows that the cyst wall includes outer chitinous and inner germinal layers. The cyst wall is surrounded by either granulation tissue or a fibrous capsule, the so-called pericyst layer,[4] which is

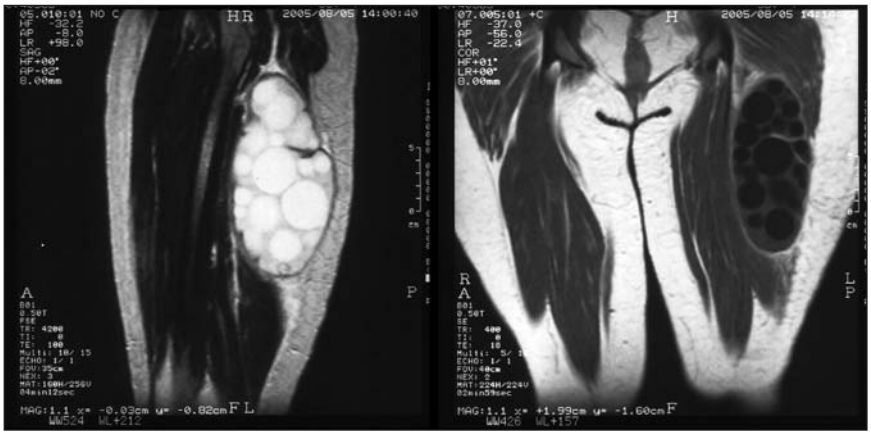

FIG.1. Hydatid cyst in the left thigh. Magnetic resonance images of a 37-year-old woman.

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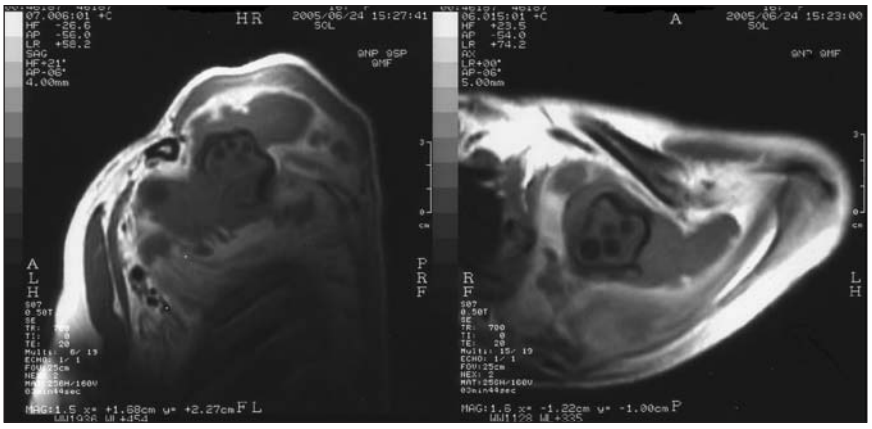

FIG. 2. Hydatid cyst in the left shoulder. Magnetic resonance images of a 17-year-old adolescent girl.

produced by the host organ as a defensive barrier and should be taken into consideration in the treatment procedure.

In 1 study,[4] cure and mortality rates for the surgical treatment were reported to be > 90% and < 2%, respectively. Surgical procedures vary from radical procedures (i.e., total cyst excision along with the pericyst) to conservative procedures (i.e., neutralization of the parasite and evacuation of the cyst contents, with the pericyst left in place).[5] In a study by Saidi,[6] clearing of the parasites alone was found to be a sufficient treatment modality in cystic hydatid disease.

In the literature, some studies report the disadvantages of radical procedures.[5,6] According to these studies, reasons to adopt a conservative approach include the following: organ resection represents overtreatment of a benign disease; routine performing of total cystectomy or pericystectomy may increase operative complications such as massive bleeding and postoperative morbidity and mortality; cystectomy should be performed only for peripheral or pedunculated cysts; host capsule excision is rarely indicated because the capsule is a part of the host organ and is not infected; and finally, radical procedures require good patient status and surgeon experience. Further, conservative procedures were recommended by some authors because they require short surgical time, lead to minimal blood loss, have low mortality rates and require no organ resection.[6]

In our patients, partial pericystectomy and cyst drainage, which is usually performed for hydatid cysts in the liver, was preferred. Postoperative albendazole treatment was added to reduce the risk of recurrent hydatidosis.

In conclusion, partial pericystectomy and cyst drainage seems to be a reasonable treatment modality in that it is minimally invasive, effective, easily applied and well tolerated. We believe that this treatment option should be taken into account in patients with a primary muscle hydatid cyst.

Competing interests: None declared.

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