A Large Primary Hydatid Cyst of Thigh: A Case Report

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Abstract Primary hydatid disease of musculoskeletal system is rare. A 60 year old woman presented with soft swelling in medial aspect of thigh, of long duration which was gradually increasing in size. She was initially diagnosed as lipoma of thigh, but ultrasonography revealed to be a cystic swelling suggestive of hydatid disease. MRI further reinforced the diagnosis. However serologic test (ELISA) was negative. Patient was given albendazole preoperatively. The swelling was removed en bloc and advised for adjunctive albendazole chemotherapy (15 mg/kg/day) for three months.

Keywords Hydatid cyst · Primary · Thigh

Introduction

Echinococcal cysts are usually found in liver and lungs, but can affect any part of the body. Differential diagnosis of hydatid disease should be considered for every soft cystic mass in any anatomical location, especially in areas where the disease is endemic.

Case Report

Sixty year old female presented with large soft tissue swelling in the medial aspect of left thigh. The swelling was present

from last 30 years and gradually increasing in size. There was no pain in the swelling. On local examination, swelling was approximately 28 cm × 17 cm, non tender and soft. Initial diagnosis of lipoma was made but ultrasonography revealed it to be a cystic mass with possibility of hydatid disease. MRI was advised to confirm the diagnosis and for clear identification of involved structures and for surgical planning (Figs. 1 and 2). Serologic test, ELISA was negative. CT head, ultrasound abdomen and thorax and X-ray chest did not reveal hydatid disease of any other viscera. Cyst was removed en bloc, which was 25 cm × 15 cm in dimensions (Fig. 3). Cut section showed multiple daughter cysts (Fig. 4). Cyst cavity was thoroughly irrigated with 10% betadine and wound closed after putting closed suction drain. Post operative period was uneventful. Histopathological diagnosis confirmed the diagnosis of hydatid disease.

Discussion

Musculo-skeletal hydatid disease may either be secondary or primary. In secondary disease, there is primary location of hydatid cyst in liver, lung or spleen that has been operated or not operated.

Primary hydatid disease of the skeletal muscle is rare, as the parasite has to cross pulmonary and hepatic barriers to reach the muscles [1]. The high lactic acid level in muscle tissue is considered unfavourable for the survival of parasite [2].

This patient had not been operated for hydatid disease previously and investigations did not reveal any hydatid cyst in brain, liver, lung or spleen. So, this patient was diagnosed, having primary hydatid disease of musculoskeletal system.

Diagnosis of echinococcosis should be considered when slowly growing soft tissue is present in a patient from endemic area. Before we plan for surgical excision or biopsy or FNAC,

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Fig. 1 Longitudinal MRI section through the lesion

Fig. 2 Transverse MRI section through the lesion

Fig. 3 Gross specimen of excised hydatid cyst of thigh

Fig. 4 Cut section of the excised hydatid cyst

diagnosis of hydatid disease should be excluded, so as to avoid leakage of cyst contents and accompanying risk of anaphylaxis and secondary hydatidosis.

Serologic tests and ultrasonography should be performed before any invasive procedure. ELISA is 80–100% sensitive and 88–96% specific for hydatid liver disease but less sensitive for lung (50–56%) or other organ involvement (25–26%) [3]. Hydatid serology is only valuable when it is positive, negative serology does not exclude the diagnosis [4]. Serologic test (ELISA) was negative in this case. Other serologic test like IHA can be advised and its sensitivity has been reported as 67% [5].

Ultrasonography (US) should be the first diagnostic tool used for detection of hydatid disease of soft tissue [6]. The sensitivity of US is 95% and if vesicular fibrils are present the sensitivity of US increases to 100% [4]. US of this case was suggestive of hydatid disease.

Preoperative MRI was planned, as MRI is reported to be the best for clear identification of involved structures and for surgical planning [6, 7]. MRI is capable of adequately demonstrating most features of hydatid disease, with the exception of calcification [8]. Typical signs of hydatidosis are multivesicular lesions with or without hypointense peripheral ring (rim sign) [9].

En bloc resection alone is curative for intramuscular hydatid disease [1, 10]. In this patient we were able to remove whole of the cyst *in toto*. Adjunctive chemotherapy was given to eliminate any possible larvae dissemination and to take care of possible hydatid disease at other sites.

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