Case Report

Primary Cervical Paraspinal Hydatid Cyst: A Case Report

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Abstract

Hydatid disease is a parasitic infection that usually involves liver and lungs. Hydatid cysts of the head and neck are rare, even in countries where echinococcal infestation is endemic. This report presents one patient with hydatid cyst, diagnosed using computed tomography, in whom the cysts were located between cervical paravertebral muscles. The purulent cyst content was aspirated and the thick cyst wall was totally excised. We did not experience any recurrences in our case which we had performed cyst aspiration with removal of the cyst capsule.

Keywords: Hydatid cyst, echinococcus granulosus, paraspinal muscle, computed tomography

INTRODUCTION

Hydatid disease is a parasitic infection caused by Echinococcus granulosus or Echinococcus multilocularis. Human beings are affected by the excreted eggs found in the feces of the sick animals. After the development of the embryo, various organs are infested through the migration of the intestinal mucosa. The liver and the lung are the most frequently involved organs with the ratios of 75 % and 15 %, respectively. The involvement of all the other organs including brain, heart, kidney, bone, skeletal muscle, breast, thyroid gland consist of 10 % and are listed under unusual localization classification. Primary skeletal muscle hydatid cyst without liver and lung involvement is rare even in endemic regions. Computed tomography (CT), magnetic resonance imaging (MRI) and ultrasonography (US) are all useful techniques to localize the lesions and may be used to predict the differential diagnosis of the cystic structure. The preoperative diagnosis is very important in planning the
surgery. First treatment choice of muscular hydatid cyst is the combination of cyst removal without rupture and albendazole therapy\(^4\).

**CASE PRESENTATION**

A 22-year-old man was admitted to our clinic with cervical pain. Routine physical and neurological examination was normal. All routine laboratory tests and direct radiographs were normal. The CT finding consisting of structures that might be the part of separated germinative membrane of the cyst may primarily indicate hydatid disease (Figure 1). The echinococcal haemagglutination test was negative and the other organs were entirely normal at a detailed work up by radiological investigations. At surgery, the purulent cyst content was aspirated and the thick cyst wall was totally excised (Figure 2). Suction tube were placed near the cyst wall which will be opened by a cannula (no: 20G). Then, the wall of the cyst is opened. The content of the purulent cyst material was controlly aspirated with suction tubes and the wall of the cyst was totally removed. Albendazole (10mg/kg/day) was administered 4 days before surgical therapy and continued for 3 months. He is tried to be followed-up periodically. The last follow-up of the patient did not reveal any recurrence at the end of the second year.

*Figure 1: Axial CT scan shows a cystic lesion containing a detached germinative membrane between the cervical paravertebral muscles*

*Figure 2: Peroperative apperance of cyst wall*
DISCUSSION

Echinococcus granulosus is a parasite of dogs, wolves, foxes and jackals. Human beings are affected by the eggs found in feces excreted by the animals. After the development of the embryo, various organs are infested through the migration of the intestinal mucosa. Primary hydatid cysts disease of the skeletal muscle without other organ involvement is uncommon. Moreover, paraspinal muscles are much more rarely affected. The liver and lungs act as filters for oncospheres following penetration of intestinal mucosa, thus making it quite difficult for them to reach muscular tissue. High lactic acid level in muscular tissue is regarded to be unsuitable for the cysts survival and muscular contractions prevent fixation of larva to the muscular tissue. The proportion of hydatid disease localized in muscular tissue has been reported as 3-5%, occurring in various anatomic regions. Hydatid cysts located in the head and neck region are extremely rare, even in geographic areas in which Echinococcal infestation is frequent.

The CT, MRI, and US have recently become the most sensitive diagnostic tools. The US examination shows the membranes, septations, and daughter cysts within the cystic cavity. The CT shows detachment of the laminated membrane as linear areas of increased attenuation within the cyst, known as “water lilly sign,” as in the our patient (Figure 1).

Treatment options for the uncomplicated hydatid cyst are various and include needle aspiration under ultrasound guidance, laparoscopic approach, direct surgical intervention, or medical treatment with the use of albendazole. En bloc resection without inducing rupture and spreading the daughter cyst is recommended treatment strategy and accepted to be curative for intramuscular hydatid cyst. Albendazole treatment is suggested to be given for 1-3 months period after surgery. Albendazole was administered before surgery, the purulent cyst content was aspirated and the thick cyst wall was totally excised. Albendazole treatment continued to be administered for 3 months duration according to the policy of the department of infectious diseases. The last follow-up of the patients did not reveal any recurrence at the end of the second year.

Primary hydatid cyst disease of the skeletal muscle without other organ involvement is uncommon. Moreover, paraspinal muscles are much more rarely affected. When a cystic lesion is found on radiological evaluation in muscular tissue, hydatid disease must be considered in countries where the disease is endemic.

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