Primary Hydatid Cyst of the Axilla: Report of a Case

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Key Words

Hydatid cyst • Axilla • Echinococcosis

Abstract

Objective: The aim of this work was to report a case of hydatid cyst located in the axilla. **Clinical Presentation and Intervention:** A 36-year-old female presented with a painless right axillar swelling of 6 months duration. We removed the entire cyst surgically, and macroscopic and histopathological examinations confirmed the diagnosis of axillar hydatid disease. Seventeen months after the operation there was no recurrence. **Conclusion:** This case report showed that in cases of a cystic mass in an endemic zone, the diagnosis of hydatid cyst should be considered.

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Introduction

Echinococcus granulosus infection can develop in any organ or tissue but undoubtedly, in humans, hepatic and pulmonary localizations are most frequent [1, 2] because of the life cycle of the parasite, in which the liver represents the first and the largest filter for parasitic embryos

migrating from the intestine via the portal stream filter. In this report, we describe a case of cystic axillar swelling that turned out to be a hydatid cyst on surgical exploration which is a very rare occurrence, thus emphasizing the need for a high index of suspicion in cystic swelling of axilla especially in endemic regions of the world. The differential diagnosis of a cyst in the axilla is relatively broad and generally considers two groups of rare conditions. The first group includes non-parasitic cysts such as ganglionic or inclusion cysts and cystic hygromas. The second group is comprised of parasitic cysts, and includes coenurosis, toxoplasmosis, filariasis and echinococcosis [2]. The purpose of this presentation is to draw attention to this condition to avoid complications and morbidity associated with an undiagnosed disease.

Clinical Presentation and Intervention

A 36-year-old woman presented with a non-painful soft tumour in the right axilla. The tumour had been present for 6 months and had grown gradually larger. The patient was otherwise healthy. Hydatid disease was not considered on admission. Physical examination revealed a semimobile, well-defined mass that was 8 cm in diameter. Blood tests (complete blood count and blood chemistry) were unremarkable. Ultrasonographic exami-

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Fig. 1. Magnified view of the hydatid cyst in the axilla showing the cuticle of the cyst (arrow). HE. Original magnification $\times 100$.

nation of the right axilla revealed a cystic mass, 10 cm in diameter. The patient underwent surgery on January 19, 2009. The mass was excised under local anaesthesia. Macroscopic and microscopic examination of the specimen confirmed a hydatid cyst (fig. 1). The patient had an uneventful postoperative course, and computed tomography (CT) scans of the thorax (fig. 2) and upper abdomen (fig. 3) showed no evidence of hepatic or pulmonary involvement. An echinococcal haemagglutination test was positive. She was discharged on postoperative day 2 with no further treatment. The patient remains asymptomatic 17 months after surgery.

Discussion

Primary hydatid cysts in the axilla without evidence of disease in the liver or lungs are extremely rare as evidenced by the few case reports in the available literature [1–5]. Hydatid disease is generally a benign condition but it may behave like a malignancy when it metastasizes to the lungs or other organs. It is caused by *E. granulosus* and is prevalent in sheep- and cattle-raising areas in the Mediterranean countries, Middle East, New Zealand, South America and Australia. However, due to the in-

Fig. 2. CT scan shows normal lung parenchyma.

Fig. 3. Normal liver on CT scan, with smooth liver contours; normal size of spleen.

creasing ease of travel between countries, it should also be included as a differential diagnosis of an axillar mass in non-endemic countries. Our patient was from a rural area; besides, she and her family were farmers. This kind of history might be a clue to diagnosing hydatid disease [6].

In the published cases, the disease was primary in all but one, where an axillary cystic mass developed secondary to ruptured echinococcosis of the humerus. A solitary cyst in the axilla can be considered to be primary only when no other cysts are present in the relatively more common sites of occurrence [2]. Our case showed primary involvement of the axilla without evidence of disease in visceral organs.

The location, the size and the pressure caused by the enlarging cyst define the symptoms. A pre-operative diagnosis in these patients is important so as to avoid rupture and spillage of the cyst contents during surgical intervention. The most prominent clinical features consist of persisting pain, discomfort and a palpable mass [1–5]. Our patient presented with a palpable mass which is a common symptom in axillar echinococcosis.

Serological tests like haemagglutination, complement fixation or enzyme-linked immunosorbent assay may aid in the diagnosis but are not positive in all histopathologically proven cases [1, 2]. In this case we did not need to include serological tests (e.g. complement fixation or enzyme-linked immunosorbent assay) for *Echinococcus* in the evaluation of cystic masses detected on ultrasonography because the lesion was absolutely visualized and an operation was inevitable. Furthermore, the echinococcal haemagglutination test was positive, suggesting hydatid disease.

To identify a hydatid cyst in the axilla, ultrasound, CT and magnetic resonance imaging can demonstrate cystic lesions and reveal daughter cysts [1–4]. Although imaging techniques may assist in the diagnosis of hydatid cyst,

it was missed on ultrasonography of the axilla in our case, and the mass was reported as a simple cystic structure.

Fine-needle aspiration cytology has been established as a standard procedure for the pathological diagnosis of a large variety of lesions in different locations; however, its utility in hydatid cysts has thus far been limited due to the fear of anaphylaxis and spread of disease. Nonetheless, some reports have shown it to be a relatively safe procedure for the diagnosis of hydatid cysts. In our case the diagnosis was established with macroscopic and microscopic examination of the specimen [7].

It is generally accepted that the treatment of choice for hydatid disease of the axilla is a surgical excision, as is the case elsewhere in the body. Therefore, in the surgical treatment of cysts of the axilla in which a definite diagnosis cannot be made before the operation, great care must be taken to avoid spilling of the cystic contents. Our case was treated with total cyst excision, which is usually the treatment of choice.

Medical treatment consists of mebendazole and albendazole, especially for disseminated, inaccessible hydatidosis, and for patients who do not favour the morbidity of an operative process [3–5].

Conclusion

This case showed that, although hydatid cysts in the axilla are rare, they should be considered in the differential diagnosis of cystic lesions, especially in endemic regions.

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