Ulutas Med J 2016;2(1):63-65
DOI: 10.5455/umj.20160317093539

CASE REPORT OPEN ACCESS

Primary Hydatid Disease within the Quadratus Lumborum Muscle

Aziz Arı[1] **Kenan Büyükaşık**[1] **Bülent Akçe**[1] **Cihad Tatar**[1] **Yaşar Murat Vardar**[2]

[1] Istanbul Training and Research Hospital, Department of General Surgery, Istanbul, Turkey
[2] Haseki Training and Research Hospital, Department of General Surgery, Istanbul, Turkey

Abstract

Introduction: Hydatid disease is a parasitic infestation caused by tapeworms of the genus *Echinococcus*. It may be located anywhere in the human body. The most common organs involved are the liver (52-72%) and the lungs (10-40%). Hydatid disease can rarely develop in muscular structures, accounting for 1-5% of all cases.

Case Presentation: In this study, we report the case of a 53-year-old male patient who presented with a swelling on his left lumbar region and was diagnosed with hydatid disease within the quadratus lumborum muscle.

Conclusion: If any patient living in endemic countries as Turkey presents with a swelling in soft tissues and if he or she should be undergone investigations such as biopsy or cyst aspiration, then it will be mandatory to make a cautious physical examination and accurate imaging studies by keeping in mind the hydatid disease as a probable diagnosis.

Keywords: Echinococcosis, hydatid cyst, liver, muscle

Introduction

Hydatid disease, also called *Echinococcosis* or hydatid cyst, is a parasitic infestation caused by larvae of the tapeworm *Echinococcus*. *Echinococcus granulosus (E. granulosus)* is the most common agent of the disease, whose definitive hosts are carnivores such as dogs, wolves and foxes. Herbivores such as sheep, goats, camels and horses act as intermediate hosts. In humans, following the intake by mouth, the larvae of the tapeworm penetrate the wall of small intestine and then reach the liver via the portal vein. From here, it can pass into the systemic circulation. Hydatid cysts may develop anywhere within the body, with the liver being the mostly involved organ (52-72%) followed by lungs (10-40%) (1). Hydatid cysts can seldom be located within muscles, accounting for 1-5% of all cases (2).

Case Presentation

A 53-year-old male patient presented to our outpatient clinic with a 1-year history of a swelling in his left lower back. His personal medical history and family history were unremarkable. Physical examination revealed an immobile, painless, and well-defined pal-

Corresponding Author: Cihad Tatar; Istanbul Training and Research Hospital, Department of General Surgery, Istanbul, Turkey
E-mail: tatarcihad@gmail.com
Received: Feb 22, 2016 **Accepted**: March 25, 2016
Published: March 30, 2016

pable mass in the lumbar region measuring approximately 15x10 cm. The indirect hemagglutination test (IHA) for *E. granulosus* was positive at 1/512 titration. The complete blood count and biochemical tests were normal. Ultrasonography (US), computed tomography (CT) and Magnetic resonan-ce imaging (MRI) showed a multiloculated, peripheral contrast-enhancing cystic lesion of 14x13 mm in size located within the quadratus lumborum muscle suggesting hydatid disease (Figure-1). Based on these findings, the patient was operated on under general anesthesia. The cystic mass was accessed through a transverse incision made on the left lumbar region.

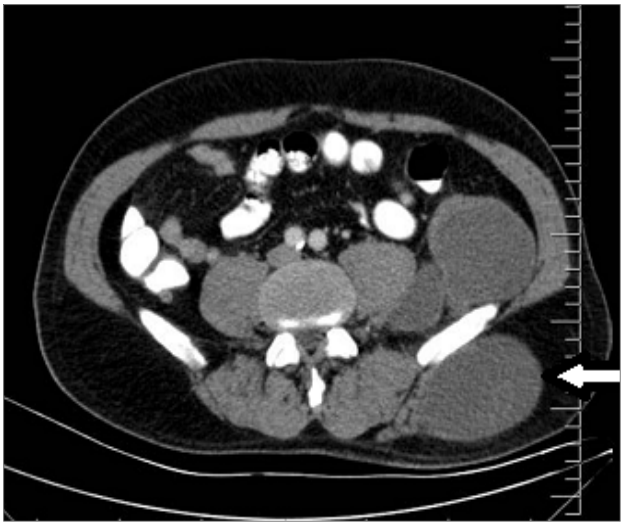

Figure-1. Preoperative computed tomography image

The cyst was aspirated after placement of saline moistened lap pads around it and a purulent fluid was obtained. The cyst wall was unroofed. Daughter vesicles were seen and a diagnosis of infected hydatid cyst was established. A sample of fluid was taken for culture and sensitivity. After content of the cyst was entirely emptied, the space was irrigated with hypertonic saline solution and 10% povidoneiodine. A partial excision of cyst wall was added and the operation was completed. Postoperative course was une-ventful. The culture result was negative and pathological examination was consistent with hydatid cyst.Albendazol treatment was started in early postoperative stage.

Discussion

Although hydatid disease is mostly located in the liver and the lungs, it can also rarely occur in muscular structures especially in the patients from endemic areas (3). Hydatid disease involving the muscles has a prevalance of 3-5% (4, 5) and it usually results from spontaneous or posttraumatic rupture of the hydatid cyst in distant part of the body as well as can occur secondarily to an operation for the hydatid cyst (6).

In diagnosis, US should be the first choice. On the other hand, in case of advanced disease, the relationship of the lesion with the surrounding tissues and adequate resection margins can be determined, and a differential diagnosis can be done by means of MRI (7). When positive the results of serological tests can be taken into account but in half of the cases of primary hydatid cyst of muscle they were reported to be false negative and the sensitivity of IHA was found 67% (8). Our patient presented with a palpable mass which was determined to be a cystic lesion by US and subsequently was found suggestive of hydatid disease by MRI. In addition, the IHA was positive at 1/512 titration by MRI and CT.

Diagnostic biopsy or aspiration should be avoided because of risk of rupture and spreading of disease (9). Surgery is currently treatment of choice (10). Our case was also treated using surgery in which the infected cyst was partially excised and completely drained.

In conclusion, in endemic countries like Turkey, it must be remembered that any patient who presents with a swelling in soft tissues should be evaluated cautiously by physical examination and imaging studies in terms of hydatid disease. In addition, no effort should be spent for making biopsy or aspiration unless hydatid disease was ruled out.

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How to cite?

Ari A, Buyukasik K, Akce B, Tatar C, Vardar YM. Primary Hydatid Disease within the Quadratus Lumborum Muscle. Ulutas Med J. 2016;2(1):63-65.

DOI: dx.doi.org/10.5455/umj.20160317093539