

An Unusual Retroperitoneal Sero-Negative Hydatid Cyst Presenting with Lower Urinary Tract Symptoms

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SUMMARY: Hydatid cysts can be found in almost every structure in human body. Thus they can mimic numerous pathologies. Serological analyses are the best assistants in the diagnosis of hydatid cysts. But as serological investigations have limited sensitivity and specificity, they might misdirect our diagnosis. Lungs are the most common involved organ in this parasitic infection. But the brain, muscles, kidneys, bones, heart, pancreas, and rarely the retroperitoneum have also been reported to be involved. An unusual case of a sero-negative hydatid cyst located in the retroperitoneum presenting with lower urinary tract symptoms is reported in this paper.

Key Words: Irritative voiding symptoms, retroperitoneal hydatid cyst, sero-negativity.

İrritatif Semptomlarla Prezente Olan Seronegatif Alışılmamış Retroperitoneal Hidatid Kist

ÖZET: Kist hidatik vücuttaki tüm yapıları tutabilen bir hastalıktır. Bu nedenle bir çok farklı patolojiyi taklit edebilir. Şüpheli vakalarda kist hidatid tanısını koyarken yararlandığımız en iyi araç serolojik analizlerdir. Ancak serolojik incelemelerin sensitivitesi ve spesifitesi sınırlıdır ve tanılarımızda bizi yanlış yönlendirebilir. Bu parazitik enfeksiyonun en sık tutulum gösterdiği organ akciğer olmasına rağmen beyin, kas, böbrek, kemik, kalp, pankreas ve nadiren retroperitoneal tutulumunda bulunduğu bildirilmiştir. Bu makalede retroperitoneal lokalizasyonda bulunan büyük bir ekinokokal kistin nadir bir prezentasyonu olarak alt üriner sistem semptomları ile başvurusu bildirilmiştir

Anahtar Sözcükler: İrritatif işeme semptomları, retroperitoneal kist hidatid, sero-negatiflik

INTRODUCTION

Hydatid cyst disease (HCD) is an infestation that caused by *Echinococcus granulosus* infection (1). Human is the accidental intermediate host for the *E. granulosus* larva, which is expelled from the adult worm that lives in the canine intestines (2). The annual incidence of HCD has been reported as 18 to 20 cases per 100.000 inhabitants (3). When the human gets infected, an abortive parasitic cycle develops, often manifested by a slow growing cystic mass located in the liver and the lungs. The larval form of parasite enters to the lymphatic circulation via penetrating the intestinal mucosa and it is transported to the liver, lung and other organs. The liver is affected in approximately 75% of the patients, the lungs in approximately 15%, and other organs involved include the brain, muscles, kidneys, bones, heart, pancreas, and rarely, the retro-

peritoneum (2). Most common complaint is an abdominal pain, however, the clinical features of hydatid disease may be nonspecific and depends on the location of the cyst. We herein report an unusual case of a large echinococcal cyst originating from the retroperitoneal space adjacent to the wall of the bladder that presented with lower urinary tract symptoms, and discuss its diagnostic considerations.

CASE REPORT

A 35 year old male who had worked as a shepherd for 10 years was admitted to our clinic with the complaint of frequency, disuria, urgency, and uncertain abdominal pain for persistent for the last 2 months. His physical examination was normal and we could not find any palpable masses on abdominal exam. Routine blood analyses revealed a white blood cell count of 5900/mm³, eosinophil count of 19 (0.3%), and an erythrocyte sedimentation rate of 34 mm/h. Other biochemical investigations were otherwise normal. His urine microscopy did not show any microscopical hematuria or pyuria. Chest X-ray revealed no pathological signs. An abdominal ultrasound of the patient showed a 55x51 mm cystic lesion that extended from seminal vesical margins to the base of the bladder, with-

Makale türü/Article type: **Olgu Sunumu / Case Report**

Geliş tarihi/Submission date: 08 Kasım/08 November 2008

Düzeltilme tarihi/Revision date: 14 Aralık/14 December 2008

Kabul tarihi/Accepted date: 06 Ocak/06 January 2009

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out any pathology of the intraabdominal organs. Abdominal magnetic resonance imaging (MRI) of the lesion confirmed a multiloculated cystic mass (Figure 1). Enzyme-linked immune absorbent assay (ELISA) for *Echinococcus* and indirect haemagglutination tests were carried out, which were reported as negative. A transabdominal exploration was then performed, the mass was mobilized from the sigmoid by blunt and sharp dissection (Figure 2), and taken out un-block without perforation. Pathological examination of the specimen was reported as cyst hydatid (Figure 3). The patient received albendazole treatment for a duration of 1 month postoperatively. An abdominal MRI obtained 6 months following surgery did not reveal any pathology.

DISCUSSION

The retroperitoneal hydatid cyst is usually secondary to rupture or surgical inoculation of a hepatic cyst (4-6). An isolated retroperitoneal hydatid cyst could be a result of haematogenous dissemination of protoscoleces after bypassing lung and liver, or by the gastrointestinal tract into the lymphatic system (6-8). The differential diagnosis of retroperitoneal cysts also includes soft tissue tumours, retroperitoneal abscess, seminal vesicle cyst, posterior bladder diverticulum, cystic lymphangioma, embryonal cyst, pararenal pseudocyst, ovarian neoplasms, teratoma and other cystic or necrotic solid tumors (4, 9).

Especially in regions that are endemic, the hydatid cyst must always be considered in the differential diagnosis of cystic lesions. A hydatid cyst is usually asymptomatic, however, the clinical findings of hydatid cyst are variable and never pathognomonic. Clinical presentation depends on the organs involved, the size of the cysts, their site within the affected organ, the interaction between the cyst and adjacent organ structures, the presence of cyst rupture, spread of protoscoleces and bacterial infection-related complications (3, 10). Cyst-related symptoms may arise from the compression or erosion of adjacent structures, and may include atypical symptoms, such as irritative urinary symptoms as in the present case.

Diagnosis of a retroperitoneal hydatid cyst can be made through the combined assessment of clinical, radiological, and serological analyses may be negative and definitive diagnosis can be realized by surgical operation and pathological examination of the cysts. The sensitivity of USG in diagnosing abdominal hydatid cyst ranges from 93% to 98%, especially when the hydatid cyst is mentioned in endemic regions (10). Laboratory findings may not always be positive in hydatid cyst disease. In our case, IgG ELISA and indirect haemagglutination tests were negative and the definitive diagnosis was obtained through surgical removal of the cyst. Although we removed the cyst without perforation, postoperatively albendazole was given to the patient. Even after careful removal of a hydatid cyst during operation without spread to the adjacent area, benzimidazoles are generally administered to the patients to avoid hematogenous spread.

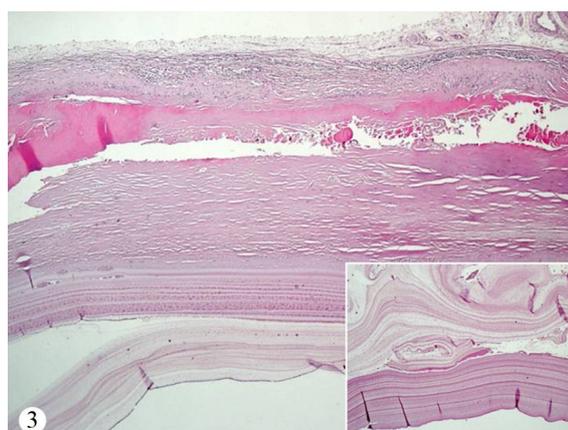
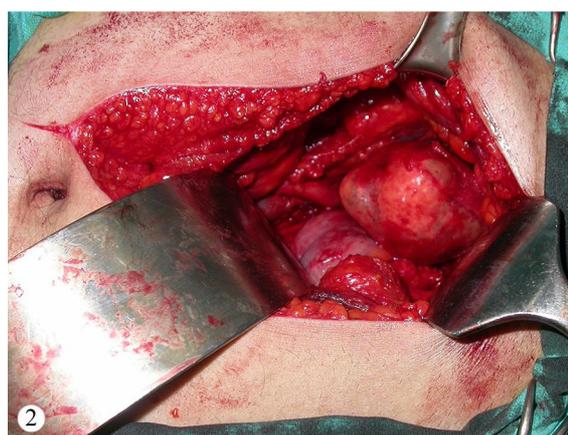
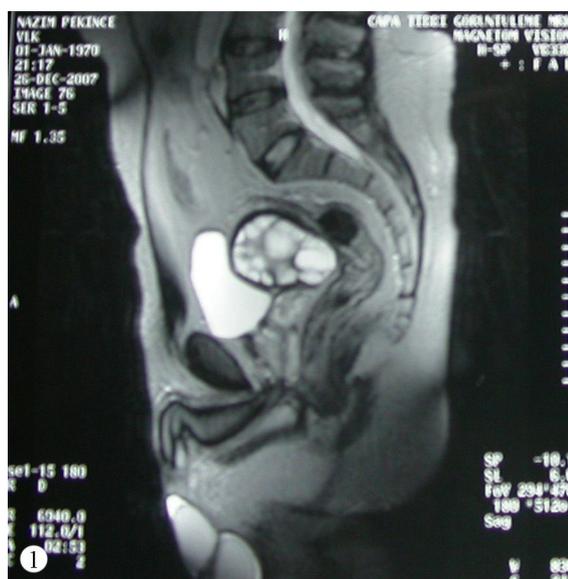


Figure 1: Sagittal MRI section showing the multiloculated cystic mass located posterior to the bladder. **Figure 2:** Surgical appearance of the mass exposed after anterior traction of the bladder dome. **Figure 3:** Microscopic examination of the pathological specimen demonstrating the cyst wall (H&E x40), with lamellar cuticular membrane on the inner side (inlet, H&E x100), surrounded by chronic inflammation characterized by mononuclear leukocyte infiltration, pericyst formation with partially hyalinized fibrous tissue.

In summary, hydatid cyst disease may present with atypical clinical findings such as irritative urological symptoms. Although radiologic studies generally provide a clue, serologic examinations may not aid in the exact diagnosis. The possibility of hydatid cyst disease in a patient presenting with a retroperitoneal cystic mass should be suspected, especially in endemic areas such as sheep-raising Mediterranean Countries, and the definitive diagnosis may require surgical removal and pathological examination of the specimen.

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