Retroperitoneal Hydatid Cyst Simulating Irreducible Inguinal Hernia: Case Report

İrredükte Kasik Fıtığını Taklit Eden Retroperitoneal Kist Hidatik: Olgu Sunumu

Retroperitoneal Kist Hidatik / Retroperitoneal Hidatid Cyst

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Özet

Kasıktaki bir şişlik, göründüğünden çok daha komplike olabilir. Kasık fıtığı kesesi içerisinde pankreas hariç, karın içerisindeki tüm organlar, hatta mide dahi bulunabilir. Çok deneyimli bir cerrahın bile beklenmedik birşeyle karşılaşma olasılığı hiç de az değildir. İzole retroperitoneal kist hidatiğe çok nadir rastlanır ve genellikle başka bir organ tutulumuna sekonder görülür. Türkiye yi içeren akdeniz bölgesinde endemiktir. Burada başka bir organ tutulumu göstermeyen, inguinal kanala uzanım göstererek irredükte inguinal herniyi taklit eden bir retroperitoneal kist hidatik olgusunu sunuyoruz.

Anahtar Kelimeler

Kist Hidatik; Kasık Fıtığı; Retroperitoneal Bölge

Abstract

A swelling in the groin may be much more complicated than it seems. All abdominal organs, except pancreas, even the stomach have been found within the inguinal hernia sac. So even after vast experience it is not uncommon for a surgeon to see something unexpected. Hydatid disease is endemic in Mediterranean region including Turkey. Isolated retroperitoneal hydatid disease is extremely rare and is usually secondary to the involvement of other organs. We here present a case of hydatid disease of the retroperitoneum without any other organ involvement, projecting to the left inguinal canal mimicking irreducible inguinal hernia.

Keywords

Hydatid Cyst; Inguinal Hernia; Retroperitoneal Space

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Introduction

Diagnosis of inguinal hernia often seems simple. Usually no further investigation for diagnosis is needed. Seldom, this simple entity may present as a result of another distant pathalogy. We here present a case of hydatid disease of the retroperitoneum, suddenly projecting to the left inguinal canal mimicking irreducible inguinal hernia.

Case Report

A 38 years old male patient was admitted with painful swelling in his left groin. On physical examination he had a soft, mobile mass in the right inguinal region with increasing dimensions during valsalva maneuver. The initial clinical diagnosis was an irreducible inguinal hernia and routine tests were done for the operation. Chest radiogram was normal as the other routine laboratory tests. The patient was operated under general anesthesia and classical inguinal incision was preferred. During the preparation of sac that was thought to be the indirect inguinal hernia, the sac was ruptured and the germinative membrane was seen. (Figure 1). With the appearance of the germinative membrane it was clarified that the etiology was hydatid cyst. In order to figure out the dimensions of the cyst, digital examination was performed. The examination revealed that there were many daughter cysts inside the sac and the borders could not be reached by fingertips. Thus the abdomen was examined through a lower midline incision where a left retroperitoneal cystic mass was bulging from the retroperitoneum and was surrounded by the left colon. The cyst was attached to the left kidney and was projecting to the left inguinal canal. No other organ involvement was found. In order to protect peritoneal soilage, the abdomen was packed with %10 hypertonic saline soaked pads. To reduce the tension within the cyst it was punctured and the hydatid fluid was aspirated. The cavity was then sterilized with %10 hypertonic saline for 10 minutes. After the removal of the vesiculas, the cyst was carefully freed from surrounding structures and total excision of the cyst was performed (Figure 1). Histological examination of the cyst also confirmed the diagnosis of hydatid disease. The postoperative period was uneventful. Postoperatively, thorax and abdomen were scanned by CT and scans showed no sign of hydatid disease.

Discussion

Hydatid disease which is known since the time of Hippocrates, is endemic in the Mediterranean countries, Middle East and South America [1-4]. Hydatid disease is caused by the cystic stage of infestation by Echinococcus granulosus whose definitive host is the dog and whose principal intermediate host is the sheep [4]. Echinococcus multilocularis, the most virulent species, which causes alveolar echinococcosis and Echinococcus vogeli which causes polycystic echinococcosis, are rarely seen. Humans are accidental intermediate hosts following consumption of unwashed and uncooked vegetables or close contact with dogs. After ingestion, the eggs are freed from their coating and the embryos of the parasite penetrate the intestinal wall and reach the liver through portal vein where most of the cysts are seen [5]. If the embryos escape the hepatic filter, they enter the systemic circulation and settle in other organs. The outermost layer of the cyst is called adventitia, the intermediate is called the laminated membrane [endocyst], and the innermost layer is called the germinative membrane which is the only living part [3]. Although hydatid cysts can occur anywhere from the head to the toe, the organs usually involved are the liver [75%], the lung [15%], the kidney [2% - 3%], and the spleen [0.9% - 8%] [2,5-7]. The cysts may be single or multiple, uni or multiloculed and thin or thick walled [2].

Hydatid disease is seen more frequently at ages 20 to 40 years [7]. Infestation usually occurs in childhood, and hydatid cyst grows so slowly [about 1-3 cm per year] that the organism may take up to 20 years to reach considerable size [2,3]. The cysts grow and increase in number by means of daughter cysts that they produce [3]. The natural course of the infection varies; some cysts spontaneously collapse or calcify while the others increase in size [2]. There are no specific local or general symptoms and signs of hydatid disease. Clinical manifestations are related with compression of the involved organ [6]. Routine blood tests are generally normal but eosinophilia occurs in 25% of cases [3]. USG, CT, MRI and Casoni skin test or complement fixation and hemagglutination inhibition serological tests may help the diagnosis. Hydatid disease can demonstrate different imaging features that differ according to the growth stage of the cyst, associated complication, and affected organs [7]. Despite characteristic imaging findings like the calcified cyst wall, microcalcifications within the daughter cysts, varying fluid densities between cysts and surrounding organs, hydatid disease in unusual anatomic locations may make differential diagnosis difficult [3]. Total cystectomy is the best technique to get rid of the parasite, but when the hydatid cyst can't be removed completely, partial cystectomy is recommended [5]. Laparoscopic approaches are

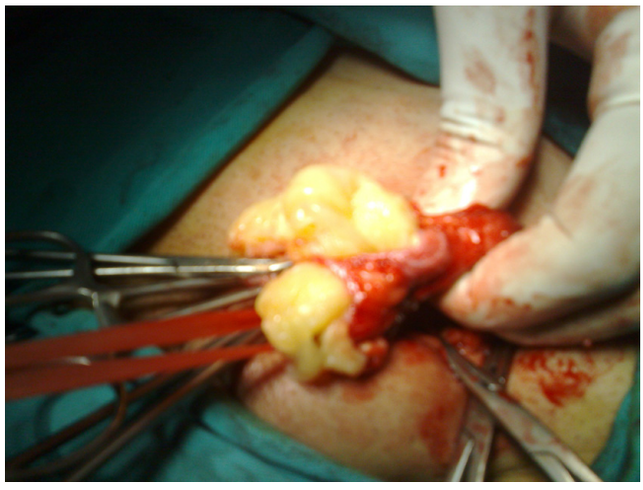


Figure 1. The hernia sac was ruptured and the germinative membrane was seen.

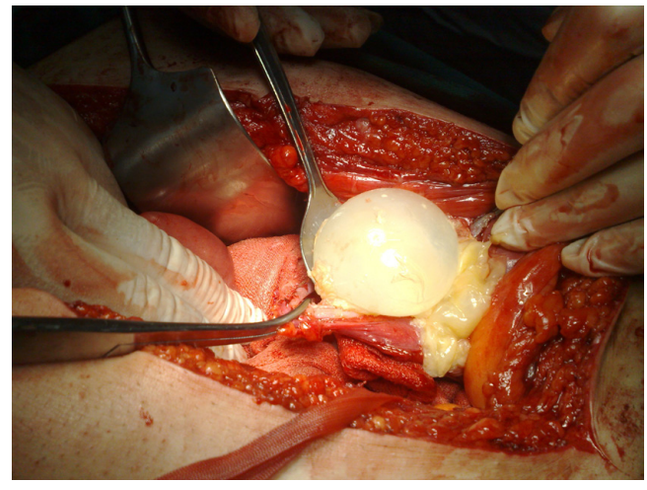


Figure 2. After the removal of the vesiculas, the cyst was carefully freed from surrounding structures and total excision of the cyst was performed.

also described and encouraging results have been achieved in some series. Irrespective of the technique, spillage of the cyst contents must be avoided and scolocidal agents must be used. Although a variety of scolocidal agents have been used, there is no consensus on which is the best agent. In experimental models, hydrogen peroxide and 10% povidone-iodine have strong scolocidal activity, whereas the efficacy of hypertonic salt solutions is limited [1]. Medical treatment with Albendazole or Praziquantel is indicated for inoperable or disseminated cases. Percutaneous aspiration, injection and reaspiration [PIAR technique] is also another nonsurgical option [1]. However, unlike most of the surgical series there is a lesion selection bias in percutaneous therapy. All series reported in the literature have used a selection bias and performed therapy on lesions that are predominantly fluid and nonruptured. Furthermore, most patients in the reported series have received chemotherapy in addition to percutaneous therapy [1].

Retroperitoneal hydatid disease is usually the result of spontaneous, traumatic, or surgical rupture of a hepatic cyst [3,7]. Primary retroperitoneal hydatid disease without any other organ involvement is very rare [3,5]. Some authors believe that the primary site of the disease has regressed or disappeared in some cases. It is known that hydatid cysts can herniate through a weakness in pericyst, which may lead to direct rupture [7]. Reviewing published reports there are three cases of retroperitoneal hydatid cysts that extended through the inguinal canal causing inguinal swelling [7-9].

Lesions of the groin which are mostly characterized by a mobile bulge consist of hernia, hydrocele, spermatic cord cyst, undescended testes, lymphadenopathy and abscess [8]. A wide spectrum of intra-abdominal and retroperitoneal conditions, even though rare, may present as a symptomatic irreducible hernia. Benign, inflammatory or neoplastic processes, as well as surgical emergencies such as intraperitoneal or retroperitoneal hemorrhage, have all been previously reported to mimic an inguinal hernia that suddenly becomes irreducible [10]. We add an additional interesting presentation to this list in the form of hydatid cyst. Although inguinal canal is an uncommon localization for hydatid disease, it should be suspected in countries where echinococcosis is endemic. If the disease is diagnosed preoperatively, percutaneous drainage could be the first choice for treatment.

In conclusion, especially in endemic regions, inguinal swelling caused by retroperitoneal echinococcosis may be misdiagnosed preoperatively as irreducible inguinal hernia. Although inguinal hernias are common and the diagnosis is usually straightforward, there are occasions during which an acutely symptomatic groin swelling may be associated with other underlying pathology. The anatomic location of the inguinal region predisposes it to a wide variety of local conditions which may mimic a groin hernia.

Competing interests

The authors declare that they have no competing interests.

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