Primary Pelvic Hydatid Cyst: Case Report

Primer Pelvik Kist Hidatik Hastalığı

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Geliş Tarihi/*Received:* 02.03.2009
Kabul Tarihi/*Accepted:* 21.05.2009

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ABSTRACT Hydatid disease (HD), also known as echinococcus or hydatidosis, is a serious health problem in areas in which it is endemic. HD has a characteristic geographic distribution. Our country is an endemic region for this disease. Echinococcus granulosus is the causative agent for the disease and it's generally found in the liver and the lungs. The liver is the most common location for the disease. No spesific symptoms and signs of HD are present. Generally patients present with unrelated complaints that are related to enlarging cysts. Cysts and microcalcifications within these cysts and varying fluid densities may be found with some imaging modalities such as ultrasound (US), computed tomography (CA) or magnetic resonance imaging (MRI). If the cyst ruptures, severe allergic reactions to parasitic antigens may occur. Clinical history, imaging findings and serological tests should be used in combination for the diagnosis. We present an unusually located pelvic HD in a 24-year-old woman which mimics the bladder.

Key Words: Echinococcosis; pelvic pain; endoscopy; ovarian cysts

ÖZET Kist hidatik kist hastalığı, diğer adıyla hidatidozis veya ekinokokkozis, endemik bölgelerde ciddi bir sağlık problemidir. Ülkemiz, bu hastalığın endemik olduğu bölge içerisinde yer almaktadır. Ekinokokkus granulosus, hastalığa neden olan mikroorganizmadır. En sık bulunduğu lokalizasyonlar sırasıyla karaciğer ve akciğerlerdir. Spesifik semptomu veya bulgusu olmayan hastalar genellikle büyüyen kistlere bağlı değişik şikâyetlerle başvururlar. Kistler ve bu kistlerin içindeki mikrokalsifikasyonlar; ultrason (US), bilgisayarlı tomografi (BT) veya manyetik rezonans görüntüleme (MRI) gibi yöntemlerle tanınırlar. Kistin rüptür olma durumunda parazitik antijenlere bağlı ciddi allerjik reaksiyonlar gelişebilir. Nadir lokalizayonlar açısından hastalığın ayırıcı tanısı zor olmaktadır. Bu durumda; klinik öykü, görüntüleme yöntemleri ve serolojik testler faydalı olmaktadır. Biz, 24 yaşındaki kadın hastada mesaneyi taklit eden primer pelvik kist hidatik olgusunun sunumunu yapmaktayız.

Anahtar Kelimeler: Ekinokokkus; pelvik ağrı; endoskopi; over kisti

Turkiye Klinikleri J Gynecol Obst 2010;20(1):53-6

A 24-year-old woman was admitted to our clinics with pain on right inguinal region for six weeks. She has been married for three years. Her medical and family histories were unremarkable. Her menstruel cycle was normal and she was on the 22nd day in her menstruel cycle. She had one child that was born with vaginal birth. She had only mild vaginal discharge which was thought as normal on gynecologic examination. Her vital signs and physical examination were normal. She did not get any relief from her pain despite conservative treatment.

US examination revealed a 7 cm anechoic cystic lesion that was thought as the bladder on anterior surface of uterus (Figure 1). Uterus and bilateral ovaries were seen as normal on US examination. The cyst was persisted on the repeated sonography that was performed immediately after urination.

Because the adnexial regions were intact, the cyst was not related to ovaries. It was thought that she did not empty her bladder. The urine analysis and the culture were requested and antiseptic and antispasmolytic treatment was prescribed. Her urine analysis was normal. Five days later, she was consulted with subfebrile fever and worse inguinal pain. Transvaginal and transabdominal US examination was repeated with full bladder. Serous cystic lesion was seen on superior location of bladder. Her complete blood count showed no eosinophilia (0.2-2.9%).

She had laparoscopic surgery under general anesthesia. The cystectomy was performed which was located on the anterior surface of the uterus. The cyst was ruptured spontaneously and then clear fluid of the cyst was aspirated.

Common crudes were diagnosed on pelvic peritoneum and intestinal serosa (Figure 2). There was no pathologic lesion on the gall bladder, liver and upper abdomen. The pelvic periton was profusely washed with saline. She had continued antibiyotherapy and there was no problem postoperatively. The pathologic examination showed cystic lesions involving basophilic cuticular membrane. These findings were compatible with HD.

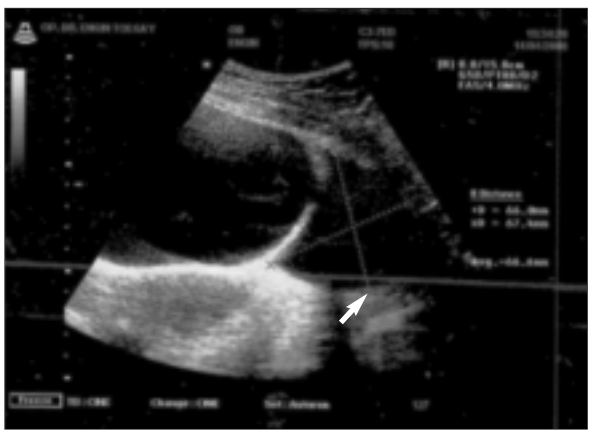

FIGURE 1: Cyst on the anterior surface of the bladder.

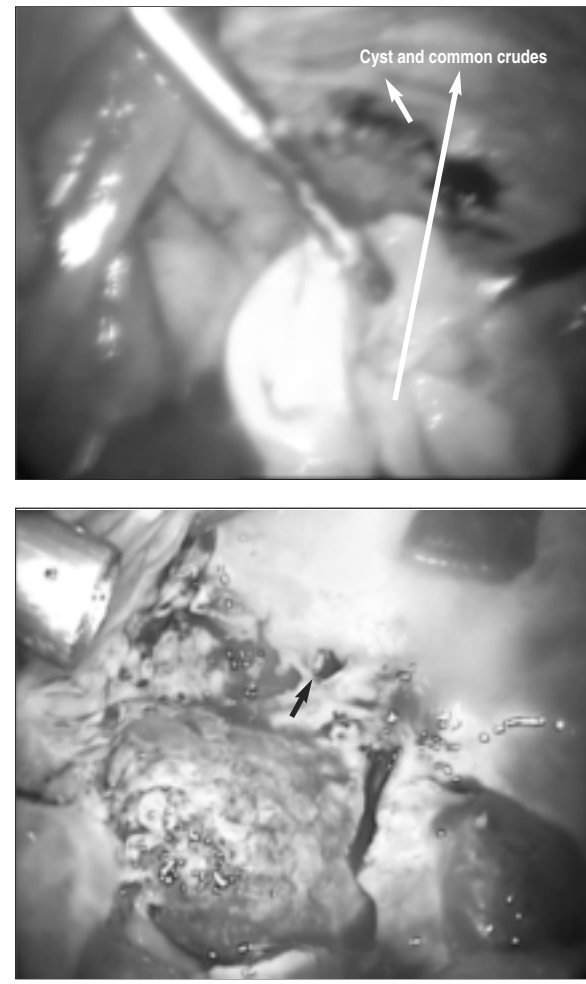

FIGURE 2: Common crudes on pelvic peritoneum and intestinal serosa.

Postoperatively, specific anti-echinococcus IgG was 1/80 positive with ELISA method and 1/160 positive with indirect hemagglutination method. For screening, abdominal MRI was performed but there was not any signs of involvement of the liver and the upper abdomen with HD. She took two times daily oral albendazole 200 mg for six months, an antiparasitic medication from benzimidazole family to prevent recurrence. The family was screened for HD and there was not any case.

She did well after the operation and the US examination did not reveal any lesion at the six month postoperatively.

DISCUSSION

HD is caused by the cystic stage of infection by Echinococcus granulosus. There is a geographic distribution of human cystic HD. Our patient was from the west part of Turkey where is a common location of human cystic HD.

Disease is transmitted through oral ingestion of the ova of the parasite on the feces of the infected animals especially dogs. A hydatid cyst has three layers: the outermost layer is adventitia and subsequently laminated membrane (endocyst) and germinal layer.

Characteristic cystic lesions with clear boundaries can be observed in all parts of the body. The most common location is the right lobe of liver (75%). The other regions are lungs (2-5%), muscles (5 %), brain (5%), spleen (2-5%), kidneys (2%), heart (1%), pancreas (1%) and central nervous sysytem (1%).[1,2] Pelvic region is an uncommon location for HD. Laghzaoui et al diagnosed hydatid cyst of the fallopian tube in the patient whose complaint was pelvic pain.[3] The diagnosis has been made using US and laparoscopy.

A typical low-back pain caused by Echinococcus granulosus was diagnosed by Ergin et al.[1] Her low-back pain has been due to hydatid disease along sciatic nevre and disappeared completely postoperatively.

Retroperitoneal HD is also rare. Usually HD localized in the retroperitoneum should be remembered when cystic masses are diagnosed in the retroperitoneum.[4] Primary pelvic hydatid cyst is usually together with liver and lung hydatid cysts.[5] In pelvis; the localization of HD may be ovaries, psoas muscle or peritoneum.[6,7] But as mentioned before, isolated pelvic HD is rare, mostly multipl hydatisosis localized in abdomen and pelvis is diagnosed.[8] Primar pelvic hydatid cyst may be presented with foot drop.[9] Rupture of cyst, urinary problems or obstructed labor are reported as complications of pelvic HD.[10,11]

There are no spesific local or general symptoms and signs of HD.[12] Rarely severe allergic reactions may occur due to cyst rupture. In this situation, mortality increases up to 4%.[1] In our patient, the cyst was located in pelvic region. She had subfebrile fever and pelvic pain as usual. But because of no cyst rupture preoperatively, any complication was not seen either preoperatively or postoperatively.

Diagnosis is made following incidental findings on imaging studies such as ultrasound, CT, MRI for unrelated complaints and pathologic examination. Labarotory and physical examination are generally normal, but eosinophilia may occur in 25% of cases.[13,14] In our case, no eosinophilia was observed.

According to the stage, complications and affected tissue; HD has a variety of imaging features on imaging studies. Ultrasonographic examination may reveal a well-defined anechoic mass with or without hydatid sand and septa, a dividing septa or daughter cysts within the fluid-filled mass, calcified cysts and undulating membranes. CT may demonstrate a well-defined hypodense mass with septa, a cyst with daughter cysts arranged at the periphery, calcified areas within the cyst and also undulating membrane. MRI may show multiloculated cysts.[15] Diagnosis was made with pathologic examination of the cyst in our case. We have not performed abdominal MRI preoperatively but it was made postoperatively for screening.

Imaging evaluation should be confirmed by serologic test which are 80-100 % sensitive and 88-96 % specific for HD in liver but are less sensitive for lungs and other organ involvement.[1] Specific anti-echinococcus IgG was 1/80 positive with ELISA method and 1/160 positive with indirect hemagglutination method postoperatively.

The most important factor in diagnosis of pelvic HD is the awareness of its possibility especially in countries with a migrant population from endemic areas.

Diagnosis of the HD should be considered to avoid leakage of cyst contents causing anaphylactic reaction before surgical excision or biopsy.

The main treatment is the surgical excision of the cyst. Chemotherapy and percutaneous treatment are widely available. The medication should be given during the preoperative and postoperati-

ve periods to decrease the chance of anaphylaxis, decrease the tension in the cyst wall and reduce the postoperative recurrence rate.[16] Medical treatment alone is not enough.[17]

In conclusion; HD should be considered in the differential diagnosis of all cystic masses in all anatomic locations included pelvic region, especially in endemic areas in the world.

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