

Primary Pelvic Involvement of Hydatid Disease

Migraci TOSUN¹, Yıldırım DURAK, Handan ÇELİK¹, Devran BILDIRCIN¹, Mehmet Bilge ÇETİNKAYA¹

Ali Faik YILMAZ²

Samsun, Turkey

Hydatid disease is caused by larval stage of a parasite named as Echinococcus. To diagnose this condition may be challenging without surgery and postoperative pathological examination due to limited value of serological studies but imaging techniques may give a clue when hydatid disease is suspected and hydatid disease shall be considered for differential diagnosis in pelvic mass. In the present case, we present a 75-year-old postmenopausal woman with pelvic hydatosis.

Key Words: Hydatosis, Pelvic involvement, Imaging modalities

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Introduction

Hydatid disease is a common condition in developing countries, caused by larvae of the cestodes named Echinococcus granulosus and Echinococcus multiloculare. Humans are the intermediate hosts and ingestion of eggs of these parasites by consumption of contaminated water or food leads to this infestation.¹ Liver (75%) and lungs (15%) are the most frequently affected organs.² Pelvic involvement of this disease is rare as 0.2 - 0.3% of all hydatosis cases.³ Although this is a rare condition, it must be considered as a cause of pelvic mass, also that may be confused with pelvic malignancies in endemic areas.⁴

Case Report

A 75-year-old postmenopausal woman, gravida 10, para 10, was admitted to urology outpatient clinic of our hospital with complaint of bilateral flank pain lasting for three months. The patient had history of cholecystectomy surgery, hypertension and hyperlipidemia and no history of previous hydatid disease. On physical examination, no pathological findings were noted. Routine blood tests and urine analysis were in normal limits except slightly elevated serum creatinine (1.6 mg/dl). The patient had an abdominal and renal ultrasonographic examination. The left kidney could not be observed. There was left-sided originated, septated, multiloculated cystic

pelvic mass measuring 126x101 mm in diameter (Figure 1). For differential diagnosis of an ovarian originated cystic mass and a hydronephrotic left ectopic kidney, an abdominopelvic CT scan was performed. The left kidney was 49x25 mm in size and in atrophic appearance with 5 mm parenchymal thickness. Also, a 13.5x11 cm sized, cystic, multiloculated, with thin septations and lobulated bordered lesion was filling the entire left adnexial location and rectouterine space (Figure 2). The uterus and right ovary were in normal size and appearance, no abdominopelvic lymphadenopathy was observed. The other abdominal organs including the liver were normally observed. The patient was planned to have a left nephrectomy operation by urologists and consulted to our clinic for the left sided adnexial mass. Vaginal ultrasound revealed a 126x101 mm sized, multiseptated, multiloculated cystic lesion possibly originated from left ovary. Serum CA125 level was 12 U/ml. A midline incision inferior to the umbilicus was performed for exploratory laparotomy. In pelvic exploration, a firm, regular countered, with 100 mm diameter pelvic mass filling the pouch of Douglas and obliterating the entire recto uterine space, adhered to and pressing onto posterior of the uterus and pushing it to the anterior. The lesion was adhered to intestines and neighboring pelvic organs. The right ovary is observed as normal but the left ovary could not be differentiated within the pelvic mass. The lesion bluntly dissected manually and multiple, whitish, fluid filled cysts in it were seen (Figure 3). Some of the cysts were ruptured during dissection due to fragility of neighboring tissues secondary to infection. Hypertonic saline solution was applied to ruptured area for denaturizing the cyst fluid to avoid spreading the disease and a possible anaphylactic reaction. The cyst wall specimen was intraoperatively sent to the frozen section examination and reported as benign cystic lesion and cuticular membranes associated with echinococci are observed. Also, the lesion was considered as pelvic hydatidosis by its pathognomonic intraoperative findings. General

¹Department of Obstetrics and Gynecology, ²Department of Urology University of Ondokuz Mayıs, Samsun

Address of Correspondence: Handan Çelik
Ondokuz Mayıs University Hospital
Department of Obstetrics & Gynecology
Kurupelit, Samsun
drhandancelik@hotmail.com

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surgeons are invited to the operation, they had explored the liver and the other abdominal organs but no extra hydatidosis involvement was observed. A total abdominal hysterectomy and bilateral salpingo-oophorectomy (TAH+BSO) was performed within the operation. The patient received albendazole chemotherapy 400 mg two times daily for the first month and 400 mg once a day for five months following the operation. The patient came to control examination four months after the operation, abdominal and urinary system ultrasound was performed. No signs of residual hydatid disease were revealed. The patient had neither urological nor gynecological complaints. The TAH+BSO material was examined and reported as chronic cervicitis, Nabothian cysts, senile cystic endometrium, sclerotic ovarian tissue for both ovaries, congested tubal sections and cuticular membranes associated with echinococci by pathology department.



Figure 1: Sonographic image of pelvic hydatidosis

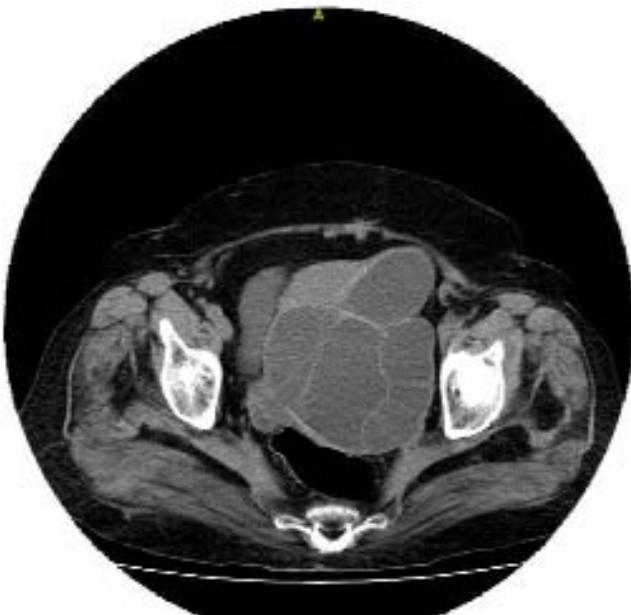


Figure 2: Cystic, multiloculated, with thin septations and lobulated bordered lesion seen in abdominopelvic CT.



Figure 3: Macroscopic appearance of hydatid cysts.

Discussion

Hydatid disease is a common health condition in endemic areas that is caused by larvae of the parasites named *Echinococcus granulosus* and *Echinococcus multilocularis* and may occur anywhere in the body but mostly in the abdominal organs, mainly in the liver. Pelvic involvement of the disease is very uncommon with an incidence of 0.2% - 0.3% of all hydatidosis cases. Primary pelvic disease is also a very uncommon condition and the most of the cases are thought to be secondarily involved by spreading from the other abdominal organs. Hydatid disease may show no different symptoms when compared with the other causes of gynecological tumoral pathologies, may be presented with abdominal distension and discomfort, constipation and urinary complaints.⁵ The most common presentation is a pelvic mass of varying size suggesting an ovarian tumor.^{6,7} When gynecologic imaging methods, primarily transvaginal ultrasound is performed, pelvic hydatidosis may be confused with ovarian malignancies due to its multiseptated, multiloculated cystic appearance especially when the sister cysts are developed. A CT scan or MRI may be helpful in the diagnosis of such a condition but still having the failure of defining the differential diagnosis of pelvic hydatidosis and ovarian masses, because the disease may not always reveal its classical appearances such as fluid level from hydatid sand and the water-lily sign. The resemblance between this condition and ovarian malignancies is very challenging and the exact diagnosis is reached by exploratory surgery and sometimes, less luckily, after the pathological examination of removed tissues, organs. Surgery is accepted as the main route of treatment combined with anti-parasitic chemotherapy. Serologic tests may not be always diagnostic in every patient.

In the present case, a postmenopausal woman was admitted to urology outpatient clinic for having flank pain and no other complaints of pelvic masses. During the follow-up, di-

agnostic imaging tests were performed and a pelvic mass was revealed. With suspicious ovarian malignancy, for differential diagnosis and surgical removal of the pelvic mass, an exploratory laparotomy following the nephrectomy for left atrophic kidney was performed at the same session and intraoperative diagnosis was consistent with pelvic hydatosis, of that involving the pelvic area only. The patient was received an anti-parasitic treatment postoperatively.

Although it is an uncommon condition, due to its resemblance with ovarian malignancies, pelvic hydatid disease should be kept in mind when it's previously mentioned sonographic or CT scan appearance is observed as a pelvic mass in endemic areas. Such a skeptic point of view will provide a better management strategy for the patients of pelvic hydatosis although it's a challenging differential diagnosis to have.

Consequently, in endemic areas, hydatid disease must be considered as a cause of cystic pelvic mass and must be suspected for differential diagnosis.⁸ Imaging techniques may still have a limited value without a suspicious point of view for this diagnosis.

Primer Pelvik Hidatik Kist

Hidatik hastalık larva evresindeki ekinok isimli parazit tarafından meydana gelmektedir. Hidatik hastalığın tanısında serolojik testlerin sınırlı yeri vardır. Cerrahi ve operasyon sonrası patolojik inceleme tanıda kullanılmaktadır. Hidatik hastalık tanısında görüntüleme yöntemlerinden de faydalanılmakta ve pelvik kistlerin ayırıcı tanısında hidatik kist akla gelmelidir. Bu çalış-

mada, 75 yaşında postmenapozal bir kadında görülen primer pelvik hidatik hastalık olgusu sunulmuştur.

Anahtar Kelimeler: Hidatoz, Pelvik tutulum, Görüntüleme yöntemleri

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