

Primary Bilateral Intrapelvic Hydatid Cyst Presenting with Adnexal Cystic Mass: A Case Report

Shohre Alimohamadi¹, Arash Dehghan², and Nosrat Neghab¹

¹ Department of Obstetrics and Gynecology, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

² Department of Pathology, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

Received: 4 Jan. 2011; Received in revised form: 2 Feb. 2011; Accepted: 28 Feb. 2011

Abstract- Hydatid disease, caused by *Echinococcus granulosus*, is a common parasitic infection of the liver. Disseminated intra-abdominal hydatid disease may occur with the rupture of the hydatid cyst into the peritoneal cavity, producing secondary echinococcosis. But primary hydatid cyst in the pelvis is rare. We report a case of bilateral hydatid cyst of the pelvis in a 53 years old woman presented with adnexal cystic mass.

© 2011 Tehran University of Medical Sciences. All rights reserved.

Acta Medica Iranica, 2011; 49(10): 694-696.

Keywords: *Echinococcus*; Echinococcosis, hepatic; Larva

Introduction

Hydatid disease is an anthroponosis. This parasitic disease had long been endemic in the Mediterranean region, the Middle East, Eastern Europe, and South America. As a result of global travel, however, it is now observed in non endemic countries. Whereas liver, lung, and spleen are the most commonly affected organs, hydatid disease of the pelvis is very rare and therefore difficult to diagnose and treat (1). It is caused by the larval stage of *Echinococcus granulosus*, a parasite of the order *Cestoda* and family *Taeniidae*. Humans are the accidental dead-end intermediate hosts. Animals (e.g., dog, wolf, fox and jackal) are definitive hosts, while pigs, cattle, horses and goats are intermediate hosts. Hydatid cysts are characterized by indolent yet unremitting growth in the majority of patients, with the potential for cyst metastasis to the peritoneal surface and the lungs (2).

Cyst classification sonographic features are:

- 1) Type I, univesicular fluid filled cysts.
- 2) Type II, univesicular cysts with a floating membrane (the water lily sign).
- 3) Type III, multivesicular cysts with a prominent fluid component (the honeycomb image).
- 4) Type IV, pseudotumoral lesions with a prominent solid component.
- 5) Type V, solid, calcified lesions.

Clinical presentation of pelvic hydatid cyst are chronic pelvic pain, acute surgical abdomen (acute

pelvic pain+fever) menstrual disorders, urinary disorders, bowel disorders, signs on abdominal examination, abdominopelvic mass, tenderness and guarding (3). The pelvic organ in women are rarely the primary site of cyst formation, except as a secondary manifestation of rupture of the liver cyst so it's experience in gynecological practice is limited (4).

We report a case of hydatid cyst of the pelvis in a patient with bilateral adnexal mass.

Case Report

A 53-year-old woman gravida 3 para 4 live child 4 menopause for 6 years presented to the Department of Obstetrics and Gynecology of Hamadan University of Medical Sciences, Iran with a history of abdominal swelling which had been gradually increasing in size. The patient had persistent abdominal pain, which was dull aching in nature and localized to the lower abdomen. There was not a history of weight loss, nausea, vomiting, or jaundice and no alteration in bladder habits. On bimanual examination a right adnexal cystic mass approximately 12 cm in diameter was palpated. No other abnormality was detected on systemic and gynecologic examination. Transabdominal sonography revealed a 10×12 cm hypoechoic cyst with echogenic septations in right adnexa other abdominal organs such as liver, spleen, chest x-ray and

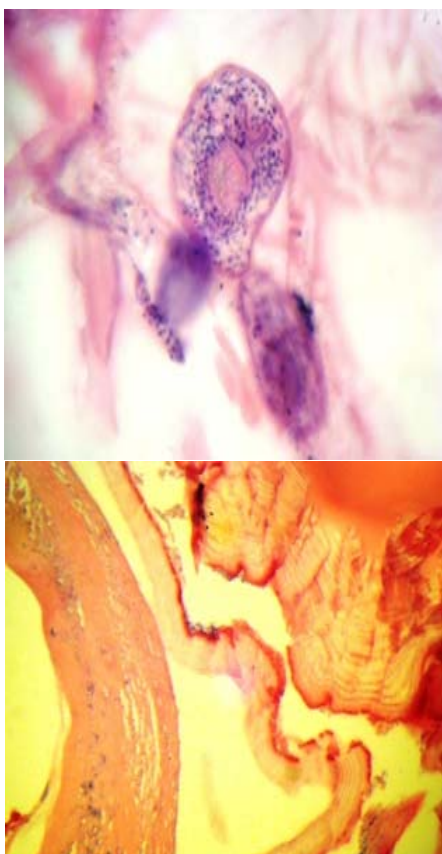
Corresponding Author: Nosrat Neghab

Department of Obstetrics and Gynecology, Hamedan University of Medical Sciences, Hamedan, Iran
Tel: +98 916 6431720, Fax: +98 811 8283939, E-mail: nosratneghab@umsha.ac.ir



Figure 1. Gross pathology of intra pelvic mass

lab tests were normal. At the time of exploratory laparotomy exploration of other abdominal organs was normal with no ascitis. We found 12cm Para ovarian creamy cyst in the right side both ovaries, tubes and uterus were normal. In the left side there was another 2×2 cyst formation in left paratubal portion. The cysts were completely excised (Figure 1). At direct microscopic examination of cyst content, scolexes were observed. Histological examination confirmed the diagnosis of hydatid cyst (Figures 2A, 2B). Albendazol 400 mg/d divided in two doses was given to the patient for 6 months to prevent recurrence.



Figures 2A&2B. Microscopic pathology of intra pelvic mass diagnosing of hydatid cyst

Discussion

Pelvic hydatid disease is rare, with a reported frequency of 0.2% to 0.9% in selected locations, its diagnosis often difficult preoperatively. Approximately 80% of all pelvic cases involve the genital area, the ovary being the most frequent location, followed by uterus. These cases are usually secondary to the accidental rupture of cyst in other areas. In primary pelvic hydatid *echinococcosis*, the disease appears to be exclusively confined to genital organs that are considered to be the primary site of inoculation via the bloodstream (4).

Imaging tools are important because of the lack of specific clinical signs. Ultrasound is the primary diagnostic tool because of its low cost and high sensitivity. Whereas type II and type III hydatid cysts are pathognomonic, cysts of other types often resemble other lesions. Type I cysts appear purely cystic and unilocular, and when located on the adnexa, they are often mistaken for other kinds of ovarian cysts or for hydrosalpinx. Type III cysts are filled with daughter vesicles and have a characteristic honeycomb appearance. Type IV cysts appear as heterogeneous masses often misdiagnosed as pelvic malignancies. Sometimes, type IV cysts may present a “whorl” image, which is indicative of collapsed hydatid membranes. Types V cysts have calcified walls and are often mistaken for fibromas (1,3,5).

The World Health Organization has recently outlined the treatment guidelines for hydatid cysts. Surgery is the treatment of choice for all patients with symptomatic disease and who are fit for surgery. The goals of surgery are removal of cyst prevention of spillage, and preservation of liver function. Albendazole is given both preoperatively and postoperatively.

Ultrasonography and computed tomography are both excellent imaging modalities for the detection of hydatid cysts. Ultrasonography is cost-effective in endemic areas and when the diagnosis of hydatid cyst is certain. However, ultrasonography is less accurate in localizing and delineating the extent of the cyst. The sensitivity of computed tomography is 90%-100% (6).

Gupta *et al.* (1998) presented primary intrapelvic hydatid cyst with foot drop and a gluteal swelling (4). Mehra *et al.* (2007) reported giant abdominal hydatid cyst masquerading as ovarian malignancy (2) and Chelli *et al.* (2009) present 11-case series between October 1, 2000 and August 31, 2008, 11 cases of pelvic hydatid disease were diagnosed and treated at the Maternity and Neonatology Unit of Department of Gynecology and Obstetrics in Tunisia (1).

Primary bilateral intrapelvichydatidcyst presenting with adenexalcystic mass

There are no specific symptoms of pelvic hydatid disease. The mode of presentation is determined by the size of the cyst and any complication. The most important factor in the diagnosis of hydatid cyst is an awareness of its possibility (4). Our case was rare due to bilateral primary intrapelvic cysts. In countries where disease is endemic the possibility of hydatid disease should be considered in differential diagnose of any cystic mass in the female pelvis.

References

1. Chelli D, Methni A, Gatri C, Boudaya F, Affes M, Chennoufi MB. Pelvic hydatid (echinococcal) disease. *Int J Gynaecol Obstet* 2010;109(1):45-8.
2. Mehra BR, Thawait AP, Gupta DO, Narang RR. Giant abdominal hydatid cyst masquerading as ovarian malignancy. *Singapore Med J* 2007;48(11):e284-6.
3. Gharbi HA, Hassine W, Brauner MW, Dupuch K. Ultrasound examination of the hydatic liver. *Radiology* 1981;139(2):459-63.
4. Terek MC, Ayan C, Ulukuş M, Zekioğlu O, Ozkinay E, Erhan Y. Primary pelvic hydatid cyst. *Arch Gynecol Obstet* 2000;264(2):93-6.
5. Okumuş Y, Tayyar M, Patiroğlu T, Aygen E. Uterine hydatid cyst. *Int J Gynaecol Obstet* 1994;45(1):51-3.
6. Safioleas M, Misiakos E, Manti C, Katsikas D, Skalkeas G. Diagnostic evaluation and surgical management of hydatid disease of the liver. *World J Surg* 1994;18(6):859-65.