

Case Report

Primary Pelvic Hydatid Cyst Presenting as an Adnexal Torsion: A Case Report

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Abstract

Background: This is a case report of an infertile woman who presented to us with lower abdominal pain. In abdominal, bimanual pelvic and rectal examination confirmed a tender right adnexal mass with irregular bulging of posterior cul-du-sac. Sonography showed a large multi cystic ovarian mass without blood flow, in favor of adnexal torsion. **Methodology:** The patient underwent emergency laparotomy and there were 2 irregular masses that loosely attached to each other. The first one was twisted and the larger second one located deeply in poster cul-du-sac with adhesion to surrounding organs. **Results:** The pathologic report of both cysts showed the diagnosis of hydatid cyst. There was not any other site involvement. **Conclusion:** Each gynecologist should be consider the possibility of hydatid cyst in dealing with pelvic mass.

Key words: Pelvic hydatid cyst, adnexal torsion, pelvic mass

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Data Availability: All relevant data are within the paper and its supporting information files.

INTRODUCTION

Hydatid cyst is a parasitic disease of the *Echinococcus*. The eggs are released in the stool of infected meat-eating animals. When food or water that contains the eggs of the parasite is eaten, its cycle starts. Echinococcosis is an endemic infection in some areas. It can affect any organs, particularly the liver and lungs. The unusual sites involvement can lead to diagnostic problem, diagnostic delay and serious complications. Pelvic echinococcosis usually occurs secondary to hepatic hydatid cyst rupture into the peritoneal cavity. A cyst in the pelvic cavity is considered as primary only when there are no other sites involved with hydatid cyst. Primary pelvic hydatid cyst is very rare and according to data in literatures, the incidence is between 0.2 and 2.25% of hydatid cysts. In this study report, a primary pelvic hydatid cyst was presented that manifested as an adnexal torsion.

CASE PRESENTATION

A 41-year-old nulligravid woman presented with complaint of lower abdominal pain for one month that aggravated from one day prior to admission. In past history, her menstrual cycle was regular with LMP of 9 days ago. She had primary infertility in last 8 years. There was not any

gastrointestinal or genitourinary symptoms. Vital signs and physical examinations were normal except in lower abdomen, that there was tenderness with a palpable mobile mass about 6×8 cm in right lower quadrant. In genital exam, cervix grossly was normal but in bimanual exam, uterus was ante flex and fixed. Posterior cul-de-sac in palpation was nodular and firm. Digital rectal examination revealed a large asymmetrical nodular bulging anterior to the rectum. Ultra sonography of abdomen was normal but pelvic sonography revealed a large multi cystic mass 15×7 cm in right adnexa without blood flow highly suspicious to adnexal torsion R/O of malignancy (Fig. 1). Emergency under general anesthesia was done with doubt of torsion. A superficial bilobed cystic mass about 6×10 cm, located in right pelvic side wall adjacent to the right tube. This attached to omentum, which twisted that excised (Fig. 2). This mass had loose attachment with another mass, like rabbit head shape about 15×7 cm, deeply located in the rectovaginal pouch with adhesion to the anterior wall of rectum and posterior surface of uterus and cervix (Fig. 3). Cyst was completely excised without any spillage. Both ovaries exposed, they were normal. There was no similar cystic mass in abdominal or pelvic cavities. Pathological examination of both masses confirmed hydatid cysts (Fig. 4). Postoperative hospital course was uneventful. She received three cycles of albendazole therapy and is doing well on follow up.

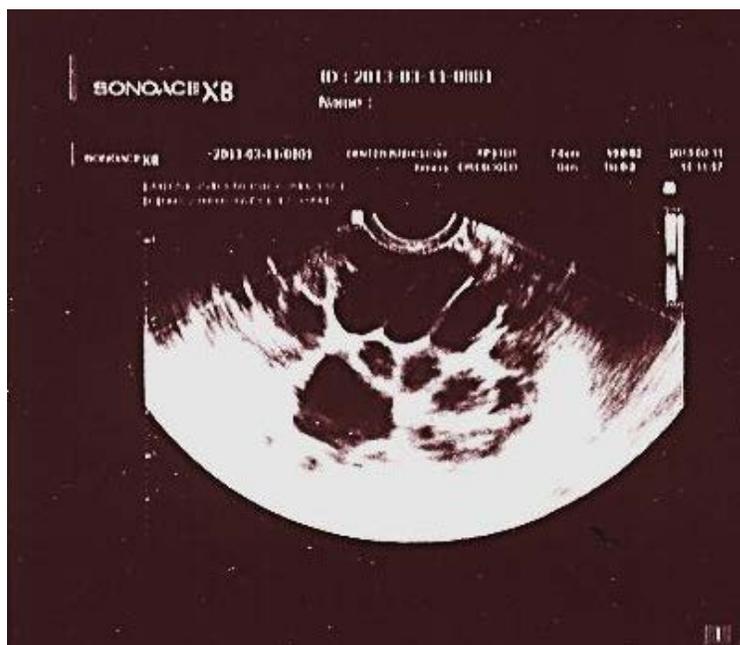


Fig. 1: Pelvic sonography: Multicystic right adnexal mass

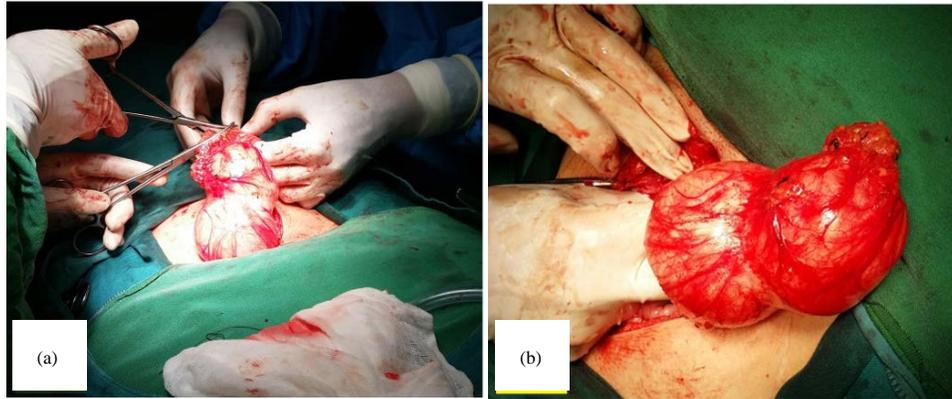


Fig. 2(a-b): Intra operative picture of twisted, 1st hydatid cyst after release of omental adhesion

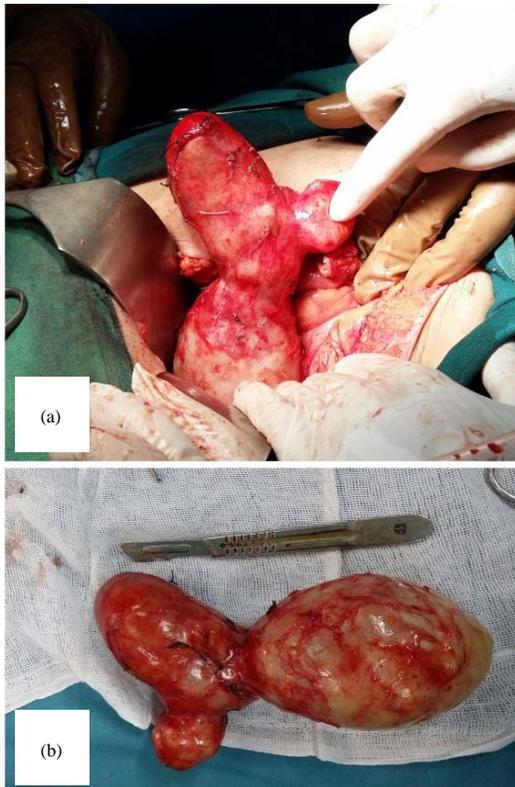


Fig. 3(a-b): Intra operative picture of deep pelvic hydatid cyst after release of loose attachment to the first one and mobilization from cul-du-sac

DISCUSSION

Hydatid disease or echinococcosis is a zoonotic parasitic disease caused by *Echinococcus* larvae. Four species of the genus *Echinococcus* are known can involve humans: *Echinococcus granulosus*, *Echinococcus multilocularis*,

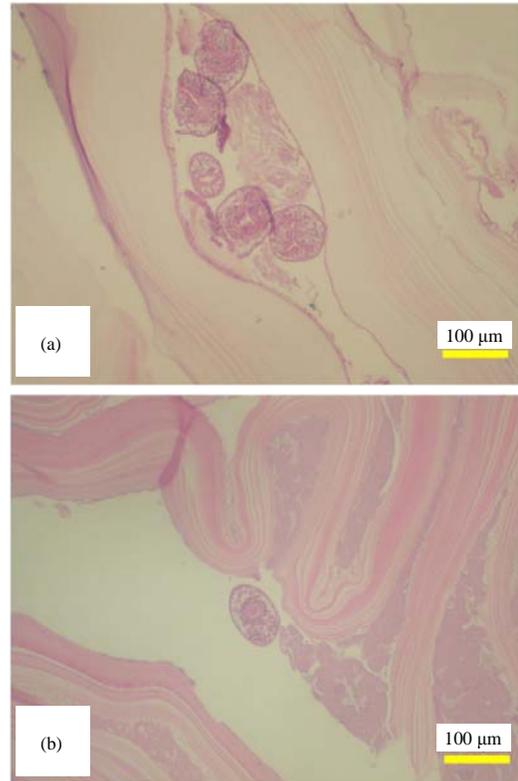


Fig. 4(a-b): (a) Laminarease and (b) Scolices. H and E 100X

Echinococcus vogeli and *Echinococcus oligarthus*. *Echinococcus granulosus* and *Echinococcus multilocularis* are the most causes of hydatid disease¹.

Human is an accidental intermediate host. The eggs are released in the stool of infected meat-eating animals. When food, water or vegetable that contains the eggs of the parasite is eaten, embryo escape from the egg, penetrating intestinal mucosa, enters the portal circulation and trapped

most commonly in the liver. If they escape the hepatic filter, the embryos enter into the systemic circulation and stay and involve the other organs such as lung, kidney, bone, brain and rarely affects, heart, spleen, pancreas, omentum, ovaries, parametrium, pelvis, thyroid, orbit or retroperitoneum and muscle^{2,3}.

Pelvic hydatid cyst, either primary or secondary is rare. It usually is secondary to the rupture of a primary hepatic, splenic or mesenteric cyst^{4,5}.

In primary pelvic hydatid cyst that is more uncommon, an isolated cyst in the pelvic cavity is considered when there are no other sites hydatid cysts. In these cases the hydatid embryo gets access to the pelvis by hematogenous or lymphatic spreading of the bowel wall^{2,6}.

Pelvic hydatid cysts usually present as an accidental finding in clinical or paraclinical investigations, a mass with pressure effects on adjacent organs such as the rectum, urinary bladder, ureter or pelvic nerve roots or allergic reactions due to rupture^{7,8}.

Imaging is important tool for confirming diagnosis, serological tests may be helpful. Surgery is treatment of choice but sometimes drug treatment with albendazole used as the primary treatment in a proportion of cases has been found to be successful, such as when the patient is not fit for surgery, the cyst size is smaller or deeply located. However, combination of preoperative albendazole therapy, surgery and postoperative albendazole therapy is a useful regime in most patients.

CONCLUSION

In conclusion, each gynecologist should be consider the possibility of hydatid cyst when a septated cystic mass is found in the pelvic cavity. Unusual sites of this disease can cause misleading in diagnosis, treatment and potentially serious complications.

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