

Case Report

PRIMARY HYDATID CYST OF OVARY- A RARE CASE REPORT

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ABSTRACT

Hydatid disease is a cyclo-zoonotic parasitic infection caused by the larval stage of tapeworm *Echinococcus granulosus*. The parasite has usually “Dog-Sheep” cycle but man may become an accidental intermediate host (Adewunmi and Basilingappa, 2004). The most commonly involved organs are liver (60%-75%) and lungs (15%-25%) while primary involvement of pelvic organs is very rare accounting for 0.25%-2.25% of all locations of hydatid cyst (Bickers, 1970). Our case is a 45yrs female presenting with chief complaints of pain lower abdomen since three months and bleeding per vaginum since two months. Total abdominal hysterectomy with bilateral salpingo-oophorectomy and resection of right ovarian cyst was performed and sent for histopathological examination. Histopathological examination revealed it to be Hydatid Cyst of ovary. Thus, this case underlines the importance of histopathological examination in diagnosing such a rare disease and emphasize that any gynecologist, radiologist, or histopathologist should suspect hydatid cyst whenever a septate cystic pelvic mass is found.

Keywords: *Hydatid Cyst, Echinococcus Granulosus, Ovary*

INTRODUCTION

Hydatid disease is a cyclo-zoonotic parasitic infection caused by the larval stage of tapeworm *Echinococcus granulosus*. The parasite has usually “Dog-Sheep” cycle but man may become an accidental intermediate host (Adewunmi and Basilingappa, 2004). This infection is more common in countries where people keep cattle, sheep, and dogs near their living places (Aksu *et al.*, 1997). It is found mostly in Australia, Argentina, Chile, Africa, Eastern Europe, Middle East, New Zealand and Mediterranean region, particularly Lebanon and Greece.

The most commonly involved organs are liver (60%-75%) and lungs (15%-25%). Others organs involved include muscles (5%), bones (3%), kidneys (2%), brain (1%), and spleen (1%) (Aksu *et al.*, 1997). Primary involvement of pelvic organs is very rare accounting for 0.25%-2.25% of all locations of hydatid cyst (Bickers, 1970).

CASES

A 45yrs female presented with chief complaints of pain lower abdomen since three months and bleeding per vaginum since two months. On general examination patient was of fair built, well-nourished with no lymphadenopathy. Systemic examination of the patient was normal. On vaginal examination, uterus was found to be bulky, 8-10 weeks size, bulging in posterior fornix. Ultrasonography of the patient was suggestive of fibroid uterus with right ovarian cyst.

Total abdominal hysterectomy with bilateral salpingo-oophorectomy and resection of right ovarian cyst was performed and sent for histopathological examination.

Gross examination of the specimen- Formalin fixed specimen consists of uterus and cervix with bilateral adenexa and right ovarian cyst. Uterus and cervix measured 8×5×4 cm. Cervix appeared unremarkable. On cutting, utero-cervical canal was patent and endomyometrium measured 2 cm. On serial cutting, multiple fibroids were seen ranging in size from 0.3 cm to 3 cm in diameter. Left tube measured 3 cm in length, on cutting lumen was patent. Left ovary measured 2.5×1×0.8 cm. External surface –grey-white, cut surface- grey-white. Right tube measured 3.5 cm in length, on cutting lumen was patent. Right ovary measured 3×2×1 cm. External surface- grey-white, cut-surface- grey-white to grey-brown. Right ovarian cyst measured 5×3.5×3 cm. External surface grey-white. On cutting clear fluid

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came out and multiple cyst were seen ranging in size from 0.3 cm to 3 cm separated by delicate septa. Cyst wall measured 0.3 cm.

Microscopic examination- Cervix showed chronic non-specific cervicitis with nabothian cyst. Endometrium was in proliferative phase and myometrium showed leiomyomas. Right ovary revealed Hydatid Cyst. The cyst consisted of a pericyst with chronic inflammatory cell infiltration, an outer laminated, chitinous ectocyst layer [figure-1] and inner germinal layer containing nuclei in eosinophilic protoplasmic mass [figure-2]. Left ovary and both fallopian tubes were unremarkable.

DISCUSSION

Hydatid cyst involving female pelvis is rare and isolated primary pelvic hydatid disease is still uncommon. Bicker *et al.*, (1970) reviewed 532 cases of hydatid cyst from an endemic area over a period of 20 yrs and found only 12 cases in the pelvis (Bickers, 1970). According to clinico-epidemiological study conducted by Akhtar *et al.*, (2011), among 117 cases of hydatid disease in central India there was only 1 case of primary pelvic hydatidosis (Akhtar *et al.*, 2011). A solitary pelvic hydatid cyst is considered primary when no other such lesion is found in liver, lung, kidney, spleen, or peritoneal cavity (Selvaggi *et al.*, 1978).

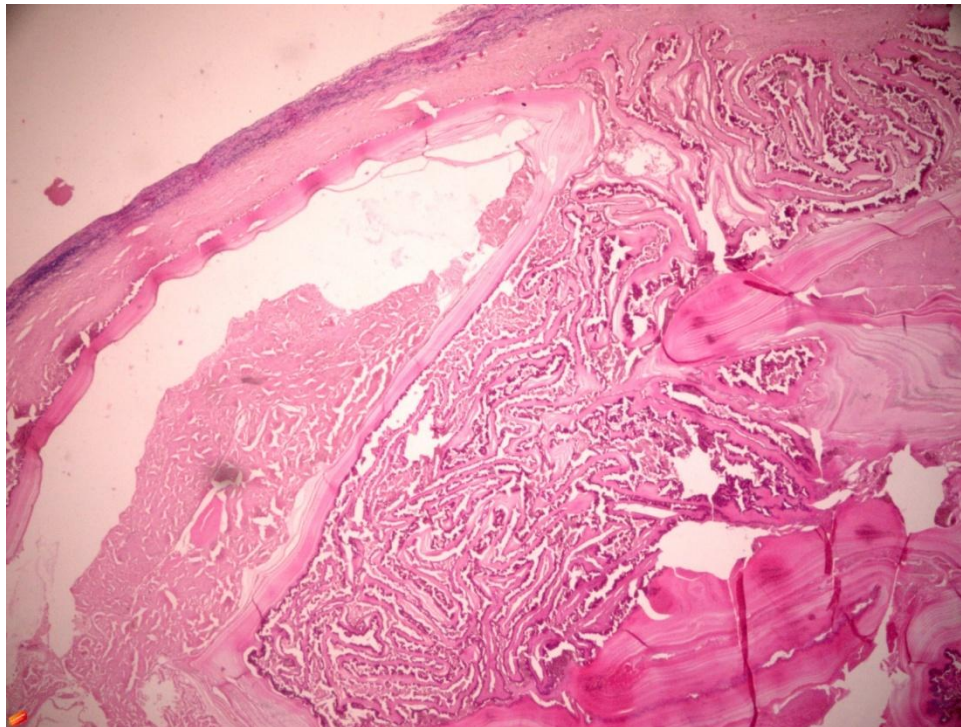


Figure 1: (40 x, H&E)- Pericyst with chronic inflammatory cell infiltration and an outer laminated ectocyst layer

In our case also, we did not find such lesion anywhere else other than ovary. Dissemination via lymphatic or systemic circulation has been implicated as a possible route to produce primary hydatid diseases outside the liver and lung (Akhtar *et al.*, 2011). In female, genital organs are reported to be the most affected areas in pelvis, which can be related to their relatively high vascularity and true invasions from connective tissue of peritoneum of Douglas and suspensory ligaments (Terek *et al.*, 2000). Pelvic echinococcosis is symptomatically nonspecific, with complaints like abdominal tumefactions, abdominal pain, menstrual irregularities, infertility and urinary disturbances. In our case patient presented with pain lower abdomen and bleeding per vaginum. Correct diagnosis can be difficult due to the vague clinical symptoms, along with inconclusive ultrasonographic and radiological images, which merely show a

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solid/cystic ovarian mass. Hence diagnosis of primary hydatid cyst of female pelvic organ is usually possible only after surgery (Arora *et al.*, 2005).

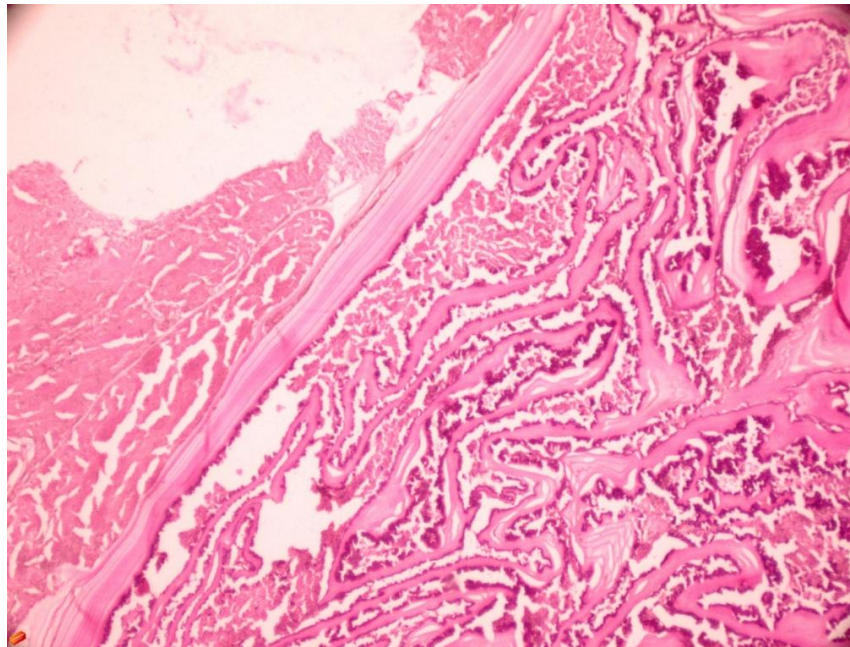


Figure 2: (100x, H&E)- Inner germinal layer containing nuclei in eosinophilic protoplasmic mass

In our case also, a surgery was performed with the provisional diagnosis of fibroid uterus with right ovarian cyst and the diagnosis could be established only through histopathological examination of the specimen.

Conclusion

We are in agreement with Adewunmi and Basilingappa (2004) and Hiller *et al.*, (2000) that any gynecologist, radiologist, or histopathologist should suspect hydatid cyst whenever a septate cystic pelvic mass is found.

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