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Case Report

A Rare Case of Ovarian Hydatid Cyst: A Must Consider Differential in Cystic Ovarian Masses Category: Case Report

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Abstract

Primary pelvis hydatid cyst is a rare event. Pelvic hydatic cyst usually occurs after dissemination of cyst at other site, like rupture of hepatic hydatid cyst. The incidence of primary ovarian hydatic cyst is rare, it may not have typical imaging features of Hydatic cyst and becomes difficult to differentiate from cystic ovarian tumors. We report a middle-aged woman affected primary ovarian hydatic cyst with no cysts at other sites, the cyst was successfully surgically removed.

Keywords: Hydatid Cyst; Ovarian Masses; Echinococcus granulosus

Introduction

Cystic echinococcosis or Hydatic cyst is a zoonotic disease caused by the larva of *Echinococcus granulosus*. It is common in areas where sheep and cattle are widely bred and is endemic in Mediterranean countries, the Middle East, Central Asia, South America, Africa, Australia, and New Zealand [1]. But foci are common in every other part of the world including India. In India, it is common in Andhra Pradesh, Tamil Nadu and Jammu and Kashmir.

Hydatid cyst is most commonly seen in the liver (52%-77%) and lungs (10%-40%). Kidneys, brain, spinal cord, orbit, spleen, adrenal gland, salivary gland, heart, pancreas, muscles, bones, subcutaneous tissue, thyroid gland, breast, etc., are involved less frequently (20%) [2,3]. There are cases in the literature about the primary ovarian hydatic cyst, but more commonly it occurs secondary to dissemination from the liver hydatic cyst [1,2,4-8].

Case Report

A 50 years female patient, resident of Chhattisgarh (India) presented with complaints of lump in lower abdomen since 2 months and pain in lower abdomen since 1month. She was not a pet dog owner. On examination, there was a palpable lump in lower abdomen with tenderness. While palpating lump, patient had urge to pass urine which could suggest involvement of / mass effect on urinary bladder. Hence contrast enhanced CT scan was performed for the evaluation of abdominal lump. CT scan showed a thin-walled cystic lesion in pelvis, measuring 12 x 9.5 x 9 cms. It shows few small cysts within in the upper aspect. No solid enhancing mural nodule was seen. Right ovary was not separately visualized, so the cystic lesion was likely arising from the right ovary. It was abutting urinary bladder anteriorly and rectum posteriorly with no infiltration (Figure 1 and 2). No other significant abnormality was seen in abdomen and pelvis. No abdomino-pelvic lymphadenopathy, ascites or omental disease seen. On CT scan, differentials were borderline neoplastic ovarian tumors and hydatic cyst, though hydatic cyst is rare. CA 125 level was 3 IU/ml.

Cyst was surgically removed with open laparotomy. On laparotomy, there was a large cyst in pelvis arising from the right ovary and was removed en bloc. On cutting open the cyst, multiple small daughter cysts were seen. Cyst was sent for histopathology evaluation. On histopathology, the cyst wall showed three layers. The inner layer showing granular cell layer with multiple small granules like tissue, the middle layer was acellular with band of homogeneous tissue and the outer layer showed fibrous tissue, confirming the diagnosis of ovarian hydatid cyst. No atypia was seen on histopathology (Figure 3).

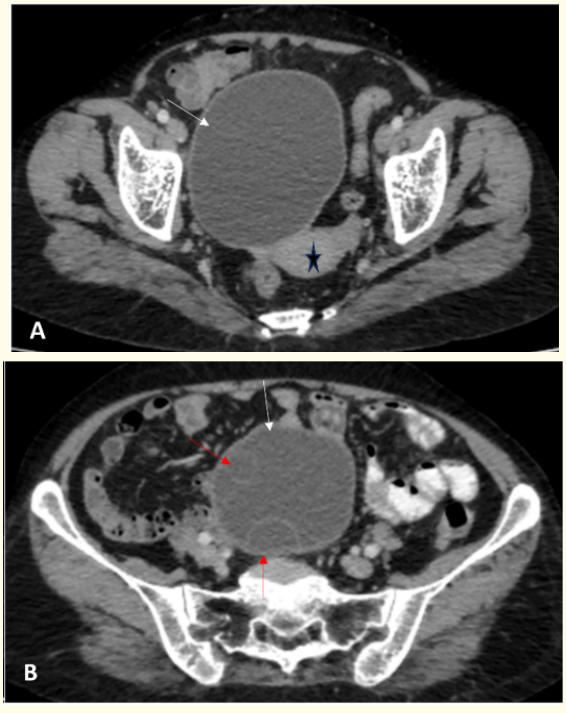

Figure 1: Axial CT scan sows a cystic lesion in pelvis on right side (white arrow in A and B) with few small internal cysts (red arrow in B). Asterisk (*) represents uterus.

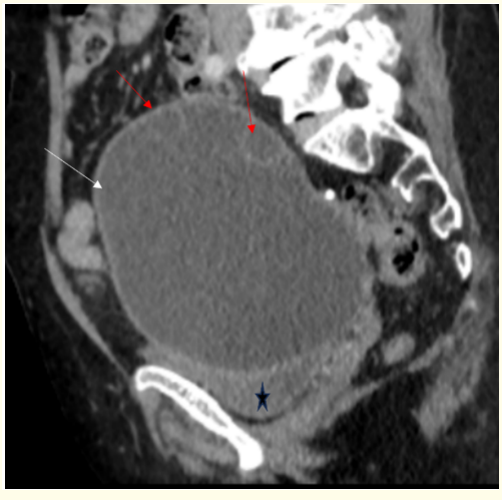

Figure 2: Sagittal reformatted CT scan images sows a cystic pelvic lesion (white arrow) with few internal cysts in its upper part (red arrow). The cyst causes mass effect on urinary bladder (*).

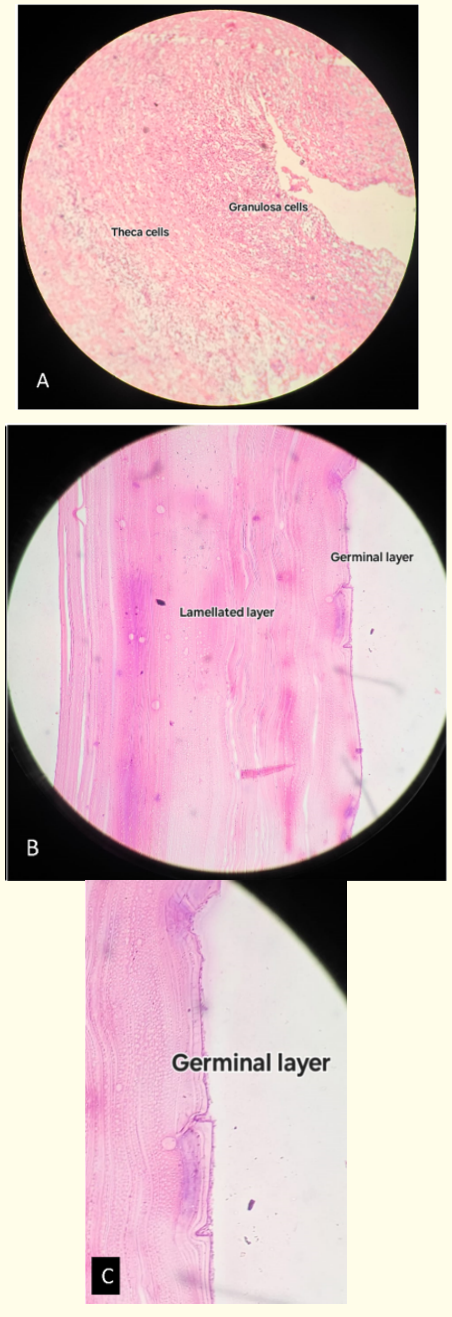

Figure 3: Histopathology images shows granular layer, lamellated layer and germinal layer, features of hydatid cyst.

Post surgery, patient is doing well with no complaints.

This was a rare case of primary ovarian hydatid cyst as our patient did not have any evidence of hydatid cyst elsewhere in body nor there was any history of treatment for prior hydatid disease.

Discussion

Hydatid disease is a parasitic infection than primarily involve liver followed by the lungs, but it can involve any organ in the body. Pelvic hydatid cyst is a rare finding with incidence between 0.2 – 0.9 % and most cases of pelvic hydatic cyst are secondary hydatidosis due to accidental rupture of hepatic hydatid cyst. Primary ovarian hydatid cyst is even rare finding [8]. In our case, ovarian hydatid cyst was primary one as there was no evidence of hydatid cyst elsewhere and there was no history of prior treatment for the hydatid cyst. Symptoms for pelvic hydatidosis are non-specific and can include abdominal pain, dysmenorrhea, infertility and symptoms due to mass effect on adjacent organs. Diagnosis becomes difficult when hydatid cyst have atypical appearance on imaging and can mimicpolycystic ovarian disease or ovarian malignancy [9,10]. Therefore high index of suspicion for pre-operative diagnosis is necessary to avoid intraoperative rupture of hydatid cyst that can lead to recurrences. In our case, there was a cystic lesion with few internal septae, finding seen in both borderline ovarian tumor and hydatid cyst.

Treatment of ovarian hydatid cyst is surgical, which is either radical or conservative. Care must be taken to avoid intraoperative rupture of cyst which may cause recurrences. The other alternatives like PAIR (Puncture, Aspiration, Injection, Re-Aspiration) have been described in the literature for patients who are not fit for surgery. The recurrence rate after surgery is about 2% and it has good survival rate of 95% [11].

Conclusion

Ovarian hydatid cyst is a rare finding. It may mimic polycystic ovarian disease and ovarian neoplasm. High index of suspicion is required for ovarian hydatid cyst, mainly when presenting in endemic area. Ultrasound and CT scan help in characterization of the cyst and for assessing the local disease extent as well as to look for other organs for the presence of involvement. Surgery is the gold standard for ovarian hydatid cyst.

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