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Hydatidosis –An Odd Ball in the Arena of Uterovesical Pouch

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Abstract: ***Echinococcosis, also called hydatid disease, hydatidosis, or echinococcal disease, is a parasitic disease of tapeworms of the Echinococcus type. Hydatidosis in humans occurs as a result of infection by the larval stages of taeniid cestodes of the genus Echinococcus. Despite some progress in the control of echinococcosis, this zoonosis continues to be a major public health problem in several countries, and in several others it constitutes an emerging and re-emerging disease. We present a case of 32 year old woman presented with burning micturition, pain abdomen, and frequency of micturition. Ultrasound & CT scan of abdomen showed features of malignant ovarian tumour. Exploratory laparotomy and resection of pelvic mass was performed and cut open section of resected mass revealed and confirmed the diagnosis of hydatid disease. This is a very rare case of primary hydatid cyst in uterovesical pouch. As per the medical literature, this is the first reported case of primary hydatid cyst of utero-vesical pouch.***

Keywords: Hydatid cyst, Echinococcus granulosus, uterovesical pouch

1. Introduction

Hydatid disease (Echinococcosis) is a zoonotic infection caused by the larval form of parasites of tapeworm, Echinococcus granulosus. Six species have been recognized, but four are of public Health concern: Echinococcus granulosus (which causes cystic echinococcosis), Echinococcus multilocularis (which causes alveolar echinococcosis), and Echinococcus vogeli and Echinococcus oligarthrus (which cause polycystic echinococcosis). Humans are the accidental intermediate host in the development cycle of hydatid disease. The liver being the most common site, while the spleen is involved in 2.5 % of the cases. Several studies have shown that these diseases are an increasing public health concern and that they can be regarded as emerging
or re-emerging diseases.[1]

2. Case Report:

A 32 years female presented with burning micturition, lower pain abdomen, frequency of micturition, white discharge and bleeding per vagina for the last one month. She also complained of intermittent fever for past six months. On examination, her vital parameters were within normal limits. Physical examination revealed a diffuse mass in the suprapubic region. Per vaginal and per rectal examination were normal.

Laboratory investigations CBC, coagulation profile, biochemistry, renal function test, liver function test and electrolytes revealed no abnormalities. ESR was of 50 mm/hr (Westergren). Urine routine and microscopy showed 2-3 pus cells. Urine culture did not grow any organisms.

Chest radiograph was normal. Abdominal ultrasonography showed round, well defined, multiloculated cystic lesion probably of ovarian tumour. CA- 125 was normal (8.11U/ml), LDH and β-HCG were within normal limits. Abdomino-pelvic CT scan showed a well-defined large homogenous multiloculated cystic lesion with thick septations in the left adnexa favouring ovarian malignancy. Young lady of 32yrs with CT finding of a pelvic mass with normal tumour markers, final diagnosis of ovarian tumour was made and the patient was prepared for exploratory laparotomy and cytoreductive surgery based on frozen report. Patient was operated under spinal and general anaesthesia. Laparotomy was performed through a midline incision. Surgical exploration revealed a large mass in the pelvic region with adhesions in the abdominal wall, urinary bladder. Uterus and ovaries were not visualized. Adhesions were very dense. After releasing the abdominal wall adhesions and gently releasing the bladder adhesions tumour was seen densely adherent to uterus and ovaries. Uterus and ovaries were lying in the pouch of Douglas. Carefully adhesions were released, as the adhesions were so dense between the uterus and tumour, uterus and left ovary were removed and right ovary was preserved as the patient was a young lady. As both the ovaries were normal, tumour was quite hard , tumour was cut open to find out the nature of the tumour, on opening tumour was found to have tense cyst with multiple daughter cysts within it. As the final diagnosis of hydatid cyst was confirmed, further procedure abandoned and abdomen closed.

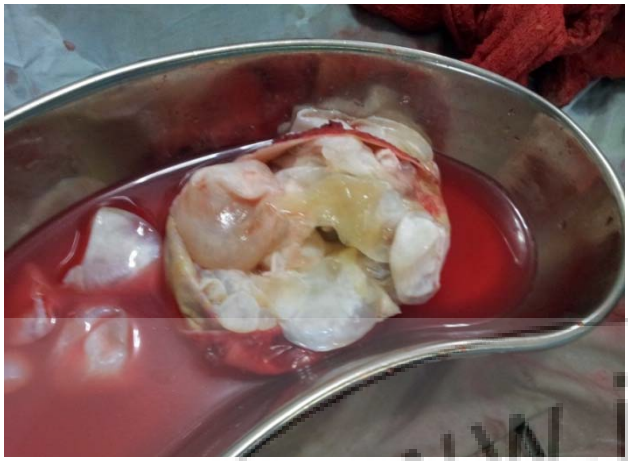

Figure 1: Grossly shows multiloculated gelatinous cyst (tender coconut)

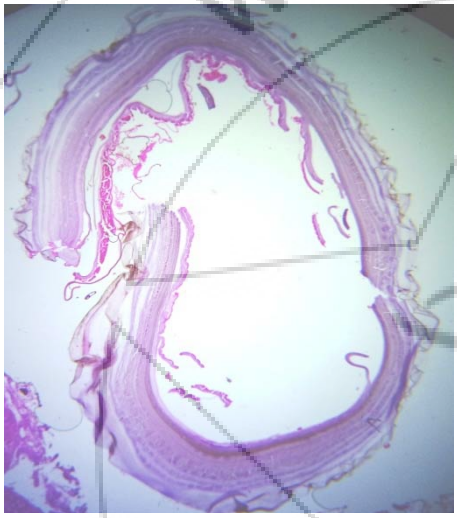

Figure 2: Microscopy showed laminated cyst wall

Specimen was sent to histopathology department; grossly it was gelatinous pearly white cystic structures. Microscopy showed the classic laminated cyst wall encircling many scolices with a double layer of hook lets; which is consistent with Echinococcus granulosus infection thus confirmed the diagnosis of hydatid cyst.

The postoperative period was uneventful and the patient was discharged on the seventh postoperative day. The postoperative course was uneventful with three additional weeks of albendazole treatment. The clinical and ultrasonography follow-up did not show any evidence of recurrence after six months.

3. Discussion

Hydatid disease caused by Echinococcus granulosus is endemic in the Middle East. In India highest prevalence is reported from Andhra Pradesh and Tamilnadu[2]. This cyclozoonotic disease continues to be the most vexing socioeconomic problem in many parts of the world. The close association of people with sheep and dogs and the unavailability of clean potable water supplies make these regions endemic to the disease. Majority of the cases of hydatid disease seen in people who come from rural areas or people who have settled in urban centres after spending life in villages[2,3]. Most of the people acquire the disease during their childhood but do not present with the clinical signs and symptoms until late adult hood. The most common sites of hydatid disease are the liver (60–70%), which acts as a first filter and the lungs (10–40%), which acts as second filter. The rare sites include spleen, thyroid, gall bladder, central nervous system, kidney, retroperitoneal region and orbit. Practically any organ can be infested by hydatid disease[4].

Although liver is the most common site of echinococcal involvement, hydatidosis can occur in any part of the body and should be considered in the differential diagnosis of cystic masses. Peritoneal hydatidosis occurs in 12% of cases and is usually the result of traumatic or surgical rupture of a hepatic or splenic cyst. Primary peritoneal hydatid cyst is rare and the mechanism of primary peritoneal infection by the parasite is still unclear. Implantation of the hydatid larva in such cases could be haematogenous. In our case the hydatid cyst found in utero-vesical pouch was primary as there was no such cyst in any other organ, thereby making it an extremely rare condition. No specific reference was found in medical literature about primary hydatid cyst in uterovesical pouch. Peritoneal hydatid cyst, either primary or secondary, represents an uncommon but significant manifestation of this disease. It is always secondary to traumatic or surgical rupture of a hepatic, splenic or mesenteric cyst. CT is the modality of choice for these patients because it permits imaging of the entire abdomen and pelvis. The lesions are generally multiple and any type of hydatid cyst can arise anywhere in the peritoneal cavity. Unilocular cysts (type I) should be distinguished from mesenteric cysts or intestinal duplication cysts.

The hydatid cyst consists of three layers. The outermost adventitia (pseudo cyst) is formed of compressed tissue, a middle layer laminated membrane of friable ectocyst and an innermost germinal layer, endocyst. Preoperative diagnosis may be difficult due to the similarity of the presenting symptoms and the radiological findings. Eosinophilia may be the finding on haematological investigation. The Casoni skin test is sensitive but not specific. Radiological diagnosis by plain X-Ray, ultrasonography (USG), CT and MRI can also be used to diagnose hydatidosis[4]. The ovary is common site of hydatidosis in the female genital tract, but overall it is extremely uncommon (less than 1%). This cyst usually presents like a malignant tumor. [5,7] There were 9 published cases of the ovarian hydatid cyst from Iran[6,7] but none of them were primary hydatid cyst in the vesico- uterine space. This is the first case of hydatid cyst in the vesico- uterine pouch. There are few references of primary hydatid cysts which were rectovesical pouch.[8]

Symptomatic large hydatid cysts should be treated surgically and cystopericystectomy remains the gold standard procedure. The surgical approach used in our case was complete removal of cyst.

4. Conclusion

The occurrence of Echinococcus granulosus in some locations of the body is very rare. These unusual sites of hydatid cyst pose diagnostic and therapeutic challenges. Rupture of cyst during surgery may cause grave risk. Some of these unusual site hydatid cysts are diagnosed only during

laparotomy. Even though unusual, surgeons should consider differential diagnosis of hydatid cyst in endemic areas while treating cystic lesions. This is the first reported case of hydatid cyst in the vesico- uterine space in medical literature.

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Legends:

Fig 1: Grossly shows multiloculated gelatinous cyst (tender coconut)
Fig 2: Microscopy showed the classic laminated cyst wall.