

CASE REPORT

Primary Pelvic Hydatid Cyst Obstructing the Labour*Sandhya S Ware^{1*}, Suwarna B Patil¹, Dilip S Sarate¹, Vinod K Sawaitul¹**¹Department of Pathology, Government Medical College, Akola-444001(Maharashtra), India***Abstract:**

Hydatid disease, caused by *Echinococcus granulosus*, is a common parasitic infection of the liver. Primary pelvic hydatid cyst is an extremely rare condition and occurs in approximately 0.7% of patients. Hydatid disease in pregnancy is a very rare condition with incidence of 1/20000 pregnancies. We report here an unusual case of hydatid cyst of the pelvis in a 30 years old multigravida presenting with obstructed labour. Ultrasonography showed well defined mixechoic cystic mass in left adnexa. Patient underwent caesarian section with delivery of a healthy baby followed by obstetric hysterectomy and laparotomy for pelvic hydatid cyst. Histopathology confirmed hydatid cyst. Patient was put on chemotherapy and is doing well on follow up. A pelvic hydatid cyst should be taken into consideration in cases of cystic masses, especially in endemic regions. The case represents an uncommon site and uncommon presentation of a common disease.

Keywords: *Echinococcus*, Hydatid Cyst, Labour, Pelvis, Pregnancy.

Introduction:

Hydatid disease is a parasitic disease caused by *echinococcus granulosus* or *echinococcus multilocularis*. Human echinococcosis was described in ancient times by Hippocrates, as “cysts full of water” in a human liver [1]. *Echinococcus granulosus* can reach any organ of the body where it develops into a small hydatid

cyst. The parasite involves dogs as the definitive hosts and sheep as the intermediate hosts. Humans are the accidental dead-end intermediate hosts. Hydatid disease occurs frequently when individuals handle infected dogs or ingest contaminated food or drink [2]. Liver, lung and spleen are the most commonly affected organs whereas hydatid disease of the pelvis is very rare and therefore difficult to diagnose. The pelvic hydatidosis in women could be either primary or more frequently secondary to hydatid cysts in liver or spleen [2]. The incidence of hydatid disease in pregnancy is very rare ranging from 1/20000 to 1/30000. So, its experience in gynecological practice is limited. Pelvic hydatid disease has various obstetric and gynecologic presentations. There are only few reports of obstructed labour caused by pelvic hydatid cysts [3, 4]. We here report an unusual case of primary pelvic hydatid disease presenting with obstructed labour.

Case Report:

30-year-old pregnant (37-week duration) female was admitted to the hospital, with history of abdominal pain and leaking per vaginum. General examination was unremarkable. Uterus of around 37-weeks duration was palpable on abdominal

examination. Per vaginal examination revealed premature rupture of membrane and fetal presentation did not occur due to the cystic mass. Laboratory investigations including renal tests and liver enzymes were normal. There was no eosinophilia. Ultrasonography of abdomen revealed a large mixed echogenic mass of size 19.5×16.5×9.5cms containing multiple solid-cystic components in the pelvis posterior to the uterus, adhered to both ovaries. Pelvic ultrasound showed single viable fetus with normal amount of amniotic fluid volume. Other abdominal organs such as liver and spleen were normal. Chest X ray was normal.

The patient was managed by multidisciplinary team and caesarean section was performed for obstructed labour. The patient gave birth to a healthy baby. On opening the abdomen, one large cystic mass with smaller cysts inside was found in the upper part of the broad ligament on the left side adhered to uterus, both the ovaries, sigmoid colon and left ureter. The mass was removed without any spillage after packing the surrounding area with 1% cetrimide-soaked sponges. Obstetric hysterectomy was also performed because of adhesion of cystic mass to the uterus. Postoperative period was uneventful. Patient was put on albendazole therapy. The specimen of obstetric hysterectomy and excised cystic mass was sent for histopathological examination.

Gross examination of the cystic mass revealed multiple cysts, daughter cysts and calcified cyst lined by pearly white membranous tissue

enclosing a granular opalescent fluid (Fig. 1 & 2).



Fig. 1: Gross Examination of the Specimen Revealed Multiple Cyst and Daughter Cysts



Fig. 2: Gross Appearance of a Calcified Hydatid Cyst

Microscopic examination showed wall of cysts and daughter cysts lined by an inner nucleated germinative layer, outer nonnucleated hyaline layer composed of delicate laminations, and an outermost fibrocollagenous adventitious layer (Fig. 3) with few degenerated scolices and hooklets (Fig. 4). Histomorphology was

consistent with hydatid cyst.

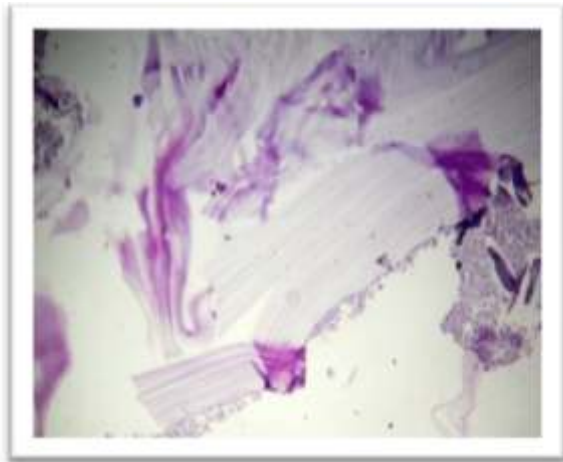


Fig. 3: Microscopic Examination showed the Wall of Cysts Lined by A Nucleated Germinative Layer and Outer Nonnucleated Hyaline Layer Composed of Delicate Laminations (H and E, 100)

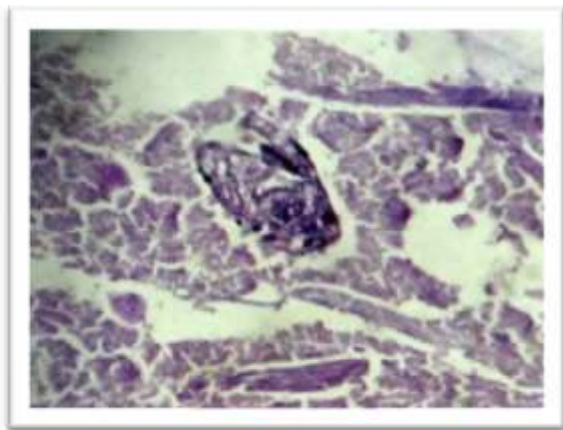


Fig. 4: Degenerated scolex (H & E, 400)

Discussion:

Hydatid disease is an anthroponozoonosis. The most common site involved by hydatid disease is the liver (59–75%), followed by lung (27%), kidney (3%), bone (1–4%), and brain (1–2%) [5]. Pelvic hydatid disease is rare, with a reported frequency of 0.2% to 0.9%. Approximately 80% of all pelvic cases involve the genital area, the ovary being the

most frequent location, followed by uterus. 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 [6]. 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 hydatid disease is very rare in pregnancy. Despite a plethora of publications on echinococcosis, little is known about the disease in pregnant women. Nevertheless, the diagnosis is more important in pregnancy because a decrease in cellular immunity may cause a rapid increase in parasitic growth. Obstetric problems complicating the hydatid disease are abdominal pain, dystocia, obstruction of labour and uterine rupture. Anaphylactic shock may occur when cysts rupture during the second stage of labour [6]. Ultrasonography is the gold standard for diagnosis of hydatid cyst in pregnancy because it shows the pregnancy status and reveals the number and locations of cysts as well as their relationship with other intra-abdominal organs. On diagnostic imaging, the radiologist has to consider hydatid cyst as a possibility in an endemic area and alert the physician because of the management implications. Serological tests are less reliable in pregnancy because of the usual immunological change [6, 7].

Surgery is the most effective treatment. Partial cystectomy, however, is another commonly

practiced modality of surgery where the surrounding adhesions or the removal of ectocyst is considered to do more harm than good. Treatment with albendazole has been found to be successful in a proportion of cases, but drug therapy is generally not used as the primary treatment except in cases where the patient is not fit for surgery or the cyst size is smaller or deeply located. Albendazole is among the category C drugs approved for use in pregnancy. The physician may administer the drug if the benefit outweighs the potential harm to the fetus. Albendazole may be more safely administered if the organogenesis of the fetus is completed [1].

It is of utmost importance that a correct preoperative diagnosis is made because all precautions must be taken to prevent dissemination and seeding of the surgical field.

Physicians treating patients from endemic areas should be aware of hydatid disease and that it can endanger the life of the mother and the baby if untreated. Hydatid disease should be considered in differential diagnosis of any cystic adnexal mass in pregnancy. Morbidity due to surgical treatment in pregnancy is very low and there are no reports of mortality. We reported an uncommon site and uncommon presentation of a common disease.

References

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