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Case Report

Bilateral Ovarian Hydatid Cysts Masquerading as Ovarian Tumours

Sitaram Mahapatro, Pallavi Bhuyan*, Surabhi, Siva Saumendra Sahoo, Md.Farid Mubarak
Department of Pathology, S.C.B Medical College, Cuttack, Odisha, India

ABSTRACT
Hydatid cyst or echinococcosis is a parasitic disease reported from all over the world. Primary involvement of pelvic organs is extremely rare and bilateral involvement of the ovary is reported in only one case[1,2,3]. We report a case of a 62 year old female who presented with pain and mass abdomen. Biochemical tests including tumour marker studies were normal. Ultrasonography revealed bilateral ovarian enlargement suggestive of ovarian neoplasia. Surgical removal followed by histopathological study revealed a diagnosis of hydatid cyst. Our case is the second report on bilateral ovarian hydatid cyst in the world literature.
Keywords: Echinococcosis, bilateral ovarian, hydatid cyst

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Address for Correspondence:
Pallavi Bhuyan
Department of Pathology, S.C.B Medical College, Cuttack, Odisha, India
E-mail: drpallavibhuyan@gmail.com
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INTRODUCTION
Hydatid cyst is a parasitic disease caused by larval stage of Ecinococcus granulosus. Humans are the accidental intermediate host in the dog and sheep life cycle of the parasite. Most frequently involved organs are liver, and then the lungs and other organs such as kidney, spleen, brain, heart and bone. Primary hydatid cyst in the pelvis is extremely rare and still rare is the primary ovarian location[2,3,4,5]. Literature review shows only one case report on bilateral ovarian hydatid disease and ours is the second case[1].

CASE REPORT
A 62 year old female presented with persistent dull aching pain and progressively enlarging mass in the lower abdomen of four months duration. Clinical examination revealed abdominal mass with tenderness. Complete blood count including the absolute eosinophil count (76/mm^3) was normal. Biochemical evaluation was within normal limits. Pre-operative analysis of tumour markers CA125 was 13 U/ml(normal <35 U/ml). Ultrasonography of abdomen and pelvis revealed bilateral multicystic enlargement,12cm and 7cm diameter, of both ovaries, suggestive of ovarian neoplasm. With a preoperative diagnosis of bilateral ovarian tumour,the patient underwent surgery. Total abdominal hysterectomy with bilateral salphingo-oopherectomy was done. Grossly both the ovaries were enlarged and globular. The cut surface revealed glistening pearly white membranous cyst wall that could easily be stripped off from the inner ovarian lining. (Fig1)

Figure 1: Figure showing bilateral ovarian multiloculated white glistening intra-ovarian cyst

The cyst contents comprised of clear fluid. The uterus, cervix and fallopian tube were grossly normal. Histopathological examination of the cyst wall showed characteristic laminated eosinophilic membrane surrounded by granulation tissue in the adjacent ovarian stroma. The inner germinal layer with attached brood capsule and scolices were also observed.(Fig 2) A diagnosis of hydatid cyst of bilateral ovaries was made.

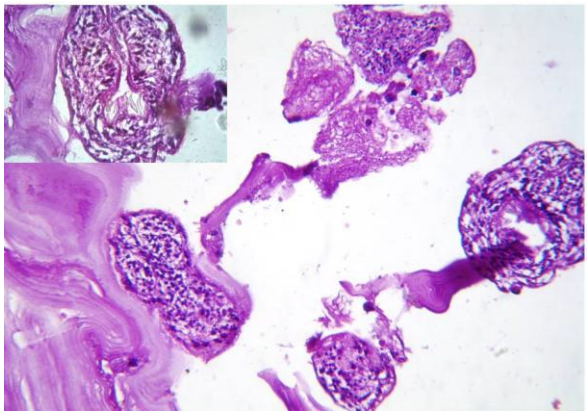

Figure 2: Photomicrograph showing eosinophilic clear hyaline laminated membrane of hydatid cyst along with scolices(400X, H&E)

DISCUSSION

Hydatid disease or Echinococcus is a zoonotic dissease is caused by larva of E.granulosus ,E. Multilocularis. E. Vugeli and E.oligarthus. In endemic country like India, the definitive host for E. granulosus is dog, and the intermediate host is sheep. Humans are accidental intermediate hosts , accquiring the diseases through contact with canine faeces.

Liver is the major organ(65-70%) because it is the first filtering system for all the ingested ova which enter by the portal circulation. A minority of the ova of an average size of 35 µm escape the sinusoidal system to enter the systemic circulation and pass through the lungs acting as the second filter for the ova, making it the second most common site of involvment(10-25%).[6,7] Liver and Lungs thus act as blood filters that check the dissemination of the parasite , thus explaining the rarity of hydatid cyst in all other locations. The pelvic organ are usually affected secondry to the liver or lung involvment . The incidence of hydatid cyst in the female reproductive system is very low and constitutes 0.5 % of all hydatid cysts.[3,4] Both the liver and lung were normal in our case. Hydatid cyst in bilateral ovaries wthout accompanying lesions in other organ defines this case as primary bilateral ovarian hydatid cyst. Primary bilateral ovarian localisation is very rare, even in endemic areas. Extensive search of published literature reveals report of only one such case[1], which itself explains the extreme rarity of bilateral ovarian hydatid disease.

There are no definitive laboratory tests for echinococcal infection. ELISA tests for echinococcal antigen (antigen 5, antigen B, myophylin, antigen V2) are highly specific, but may be negative in upto one third of patients with proven infections. Serological test may also be negative in infected patients with inactive cysts. Thus, a preoperative diagnosis of hydatid cyst is a challenge.

The conventional treatment of symptomatic hydatid cyst is surgical resection which was also done in our case. The postoperative course was unremarkable.Preandpostoperative chemotherapy with albendazole sterilises the cyst , lowers the risk of anaphylaxis, decrease the tension in the cyst wall and reduces the reccurence rate postoperatively.

CONCLUSION

Bilateral ovarian hydatid cyst is extremely rare location even in endemic countries. Moreover, in all cases of bilateral cystic ovarian tumours ,possibility of hydatid cyst must be kept in mind as a differential diagnosis moreso in endemic areas and thus warrants precaution during surgery for prevention of any spillage and anaphylactic shock.

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