

Ovarian Hydatid Cyst in Pediatric Patient Commencing as Ovarian Tumor: A Rare Site of Echinococcosis

Milankumar V Dharsandia, Sumeeta T Soni, Mahendra M Vegad

Department of Microbiology, B. J. Medical College,
Ahmedabd, Gujarat, India

Correspondence to:

Dr. Milankumar V Dharsandia,
Department of Microbiology, B. J. Medical
College, 85-“0” Block 4th Floor,
Resident Doctor Hostel, Civil Hospital
Campus, Ahmedabad, Gujarat, India.
E-mail: drmilankumar@yahoo.com

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ABSTRACT

Echinococcosis or Hydatid disease is one of the important zoonotic, as well as occupational disease with worldwide distribution. In India, hydatid disease is endemic. However, hydatid disease of ovary is uncommon condition. We report such a case of ovarian hydatid disease in an 11-year-old girl, from rural Gujarat, Western India, presenting with symptoms of urinary obstruction. This case report highlights the rarest location of the Echinococcosis.

Key words: Echinococcosis, hydatid disease, ovarian hydatid

INTRODUCTION

Even by the millennium, hydatid disease poses a world-wide problem.^[1] Although, it is not a new disease, its diagnosis, treatment and overall containment possibilities remain important public health task for almost all nations.^[1] It is distributed world wide and has been recognized since ancient times.^[2] It is caused by *Echinococcus spp*, hermaphroditic tape worm lives in the intestinal tract of carnivores such as dogs and others animals.^[3] Human contract the disease by direct contact with definitive host or ingestion of eggs through water and food sources.^[3,4] Man act as an accidental host and represents a terminal event (dead end).^[2] Infected larvae pass from Gastrointestinal (GI) tract to various organs and tissues where it produce cystic lesions, a hydatid disease.

CASE REPORT

Clinical history

A 12-year-old girl child admitted in emergency ward with the chief complaints of pain in right side of abdomen since 2 months, which was intermittent, dull, aching, gradually increasing and temporarily relieved by anti spasmodic drugs. Since 1 week, she had complaints of obstruction of urination without burning sensation and renal colic. There was no distension of abdomen.

Examination

Of abdomen suggests there were not any tenderness, rigidity and organomegaly. Other systems were normal along with vital parameters.

Laboratory workup

There was mild anemia with Hb 10.2 mg/dl total count of 12,000/mm³ with mild eosinophilia.

Imaging studies

In X-ray abdomen there was not any significant suggestive diagnostic finding. Ultrasonography (USG) abdomen revealed 4 × 6 cm sized a cystic lesion of ovary, suggestive of ovarian tumor. So, patient was referred to Onco-surgery department. They evaluated the lesion further and Computed Tomography (CT) scan was planned. Both contrast and non contrast study in CT scan revealed multiseptate cystic lesion of right ovary compressing on right sided ureter and also a part of bladder causing obstruction and there was right sided hydronephrosis and hydroureter, suggestive of ovarian hydatid cyst. Afterwards, exposure history was evaluated suggested patient's parents were shepherds and they had close association with dogs. So, further patient was referred back to pediatric surgery department.

Treatment

Patient was operated and enucleation of cyst was done by Pediatric Surgery Dept. Whole specimen containing enucleated cyst wall and cyst fluid was collected and brought to the laboratory.

In direct microscopy of cyst fluid scolices of hydatid cyst were seen with hooklets evaginated, as well as invaginated [Figures 1 and 2].

Histopathological finding of H and E (Hematoxyline and Eosin) section revealed

double layered membrane, outer laminated hyaline membrane and inner granular germinal layer. No scolices were found in H and E stained section.

On account of indirect evidence of exposure history in this patient, which was close association with dogs at home and presence of scolices in cyst fluid by direct microscopy and histopathological evidence of double layered membrane, we reached to the diagnosis that cystic ovarian lesion is none other than hydatid disease which was caused by *Echinococcus spp.*

Pre operative and post operative follow-up

As the USG findings confirm the diagnosis of hydatid cyst patient was put on daily Albendazole therapy twice a day. Which was continued postoperatively for one month. Patient was fully recovered and on follow-up visit, X-ray and USG of abdomen was done for any remaining particles of hydatid. It confirms the resolution of the lesion and eradication of hydatid cyst.

DISCUSSION

Echinococcosis or Hydatid disease is one of the important zoonotic, as well as, occupational disease with worldwide distribution.^[1,5] The common sites of hydatid disease are liver (65-70%), lung (10-25%), peritoneum (8-18%), spleen (2-3%), kidney (1-4%), subcutaneous (1-2%), retroperitoneal (0.5-1%), pancreas (0.5-0.8%), uterus and adnexa (0.5-1%) and others sites (0.1-3%).^[2] That suggest ovary is rare site involved by Echinococcus.^[6] *E. granulosus*



Figure 1: Scolex of Echinococcus with invaginated and evaginated hooklets (×10)

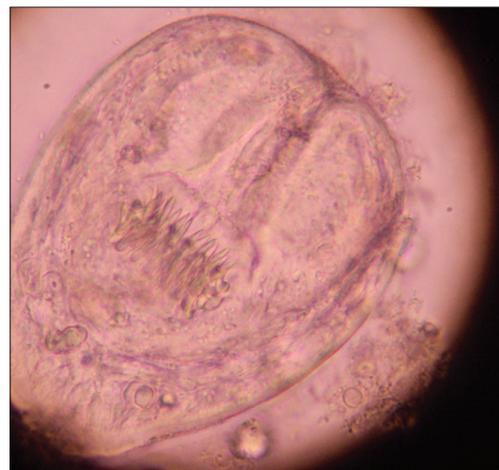


Figure 2: Scolex of Echinococcus with invaginated hooklets (×40)

causes a unilocular, capsulated, noninvasive, chronic cystic lesion slowly progressive with growth rate of 0.5-3 cm/year in their diameter and non fatal, which can be removed by surgical intervention.^[2,7,8] While other species like *E. multilocularis* causes a multilocular, non capsulate, destructive, invasive, acute fatal disease, which is difficult to be managed by surgery and spreads like malignancy.^[7-9]

Albendazole is the drug of choice, which is to be given pre-operatively, as well as, postoperatively. Complications are different depending on the sites involved.^[2,3]

CONCLUSION

Although hydatid disease is uncommon but it should always be kept in mind when patient presents with the complaints of urinary outflow obstruction, along with other causes, especially in countries which are known to be endemic like India.

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