DOI: 10.21276/aimdr.2017.3.2.SG2



Case Report ISSN (O):2395-2822; ISSN (P):2395-2814

# Primary Omental Hydatid Cyst in a 5 Year Old Child: A Rare Case.

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Received: January 2017
Accepted: February 2017



## ABSTRACT

Hydatid disease is a parasitic infestation caused accidently in humans by Echinococcus granulosus,and it is prevalent in developing countries. It primarily involves major visceral organs like liver, lung and spleen. Primary involvement of omentum is extremely rare manifestation of the disease. We present a case of primary omental hydatid cyst in a 5 years female child who was managed with exploratory laparotomy and complete excision of cyst.

***Keywords:*** Hydatid cyst, Omental hydatid cyst.

## INTRODUCTION

Hydatid disease is mostly prevalent in the developing parts of the world[1] and is caused by the larval form of Echinococcus granulosus in humans. The infestation primarily involves the major visceral organs like liver, lung and spleen.[2] The omental hydatid cyst is extremely rare manifestation of the disease; it is usually secondary to the rupture of a liver or splenic cyst. Primary peritoneal cyst should be differentiated from a mesenteric or duplication cyst.[3]

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## CASE REPORT

A 5 years old female child, resident of rural area, presented to surgery emergency department with complaint of swelling in the center of upper part of abdomen since three years and pain abdomen since one year. Swelling was progressively increasing in size, associated with pain which was constant, mild dull aching type, radiating towards her back and was not affected by food intake or change in body position. She had no significant history of vomiting or change of bowel habits; she had no other medical history and she was born by normal vaginal delivery. Immunization history and mile stones were all up to date. Examination revealed vague lump palpable in epigastrium reaching well below the umbilicus.

Routine blood examination did not reveal any abnormality except slightly raised eosinophil count. Ultrasound abdomen and pelvis done from two different sources revealed large well defined about 13.5 cm x 12.5 x 9.0 cm cystic mass in midline extending from epigastrium to dome of urinary bladder displacing the gut loops to either side, wall thickness was 2.5 mm with few internal echoes seen in it.

Investigations like CECT and MRI could not be done due to financial constraints of the family. A decision to perform exploratory laparotomy was made. Laparotomy showed an omental cyst of about 13.5 cm x 12.5 cm x 9.0 cm without any infiltration into surrounding structures [Figure 1].

Aspiration of fluid was done which was found to be clear. Cyst was opened after thorough aspiration so as to avoid spillage into peritoneal cavity. The opened cyst showed germinal layers with daughter cysts [Figure 2].

Whole of the cyst along with rim of omentum was excised. All other visceral organs were found to be normal on exploration. Peritoneal cavity was thoroughly washed with 20% saline and abdomen was closed after placing drainage tubes. Postoperatively, patient was prescribed albendazole. Postoperative period was uneventful. The patient was discharged in orally accepting- satisfactory condition. During the follow-up, patient was

monitored clinically and radiologically. No recurrence was noted.


**Figure 1: Showing omental hydatid cysts.**

**Figure 2: Showing daughter cysts.**

## DISCUSSION

The echinococcus or hydatid disease, a parasitic infestation caused by a tapeworm is commonly seen in temperate region.[1] The adult worm resides in dog or wolf's intestine (definitive host). Definite host shed eggs in their stool which contaminate vegetables and fruits. The eggs are then ingested by the cattle or sheep during grazing in the fields. Humans are intermediate and accidental host which gets infected by eating contaminated vegetables or fruits.[2,3] The parasite oncospheres after entering the stomach or intestine start penetrating their walls and reach liver parenchyma through portal circulation.[4] After escaping hepatic filter, they enter the systemic circulation and settle mainly in the lungs or rarely in other organs. When oncosphere reach a final location, where they evolve into the bowel stage, they come to be known as the hydatid cyst.[5] A role of lymphatic system in seeding of oncospheres directly from the bowel to the site of development of intra-abdominal cyst has also been shown in rare instances.[5,6] Primary omental hydatid cyst without liver and lung involvement is rare.[7,8] Intraperitoneal hydatid disease is seen in about 3.9-12.5% of patients.[9,10]

Infestation with hydatid cyst is common in childhood and may remain asymptomatic for years, until they reach a larger size. Clinical symptoms vary according to the size of cyst, sites of cyst localization, mechanical pressure produced by the cysts, and systemic reactions in cases of perforation. Differential diagnosis of the intra abdominal cystic lesions arising from omentum includes mesenteric cysts, gastrointestinal duplication cyst, ovarian cysts, cytadenoma and lymphangioma. If cyst is complicated, the differential diagnosis should also include Intraabdominal abscess and hematoma. In countries like India where abdominal tuberculosis is common, this diagnosis should be kept in mind.

Now a days, the diagnosis of hydatid disease is easier than was previously due to availability of newer imaging techniques including USG and CT scan, MRI scan. The accuracy of USG in diagnosis of hydatid cyst is 70 to 85%. Other tests for the diagnosis of cyst are immunoelectrophoresis with a sensitivity of 66-68% and ELISA with sensitivity of 95-97%. Parasitic infestation may also present with asymptomatic rise in the eosinophil count.

Over 90% of patients with hydatid cysts develop complications, unless treated and only 1% of them recover spontaneously. So prompt treatment of every hydatid case is recommended to prevent complications. Currently surgery; whether open or laparoscopic, conservative or radical; is the treatment of choice. Total cystectomy without sacrificing other organs represents the basic of surgery. Pre and postoperative albendazole therapy should be added to the treatment to prevent spillage and to avoid recurrence of disease. When a cyst is attached to the abdominal wall, percutaneous aspiration and alcohol injection and reaspiration can be useful. Complete or partial cystectomy with or without drainage or omentoplasty is another option.

The surgical method used in the present case report was intact resection.[10]

## CONCLUSION

Primary omental hydatidosis can occur without systemic dissemination to other organs. Diagnosis of hydatid cyst should be kept in mind while dealing with children with cystic abdominal lump especially in endemic areas. Abdominal tuberculosis should be ruled out before planning surgical therapy. Open surgical excision along with medical management should be contemplated to achieve complete clearance, thus preventing complications and recurrence.

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**How to cite this article:** Hans S, Khalsa MS, Singh N, Gupta A, Neki NS, Shergill GS. Primary Omental Hydatid Cyst in a 5 Year Old Child: A Rare Case. Ann. Int. Med. Den. Res. 2017; 3(2):SG05-SG07.

**Source of Support:** Nil, Conflict of Interest: None declared