

# Parietal Wall Hydatid Cyst Presenting as a Primary Lesion

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## ABSTRACT

Hydatid cyst is the disease of liver and lungs and is common in some regions especially sheep rearing countries of the world, but this disease may occur in any part of world and anywhere in the body. This report presents primary hydatid cysts located in intramuscular region of left side of the abdomen. A 54-year-old female patient from central India, farmer by occupation, non vegetarian by diet came with chief complaints of a painless mass in the left iliac fossa, gradually increasing in size over a period of 6 months. Superficial ultrasound revealed a lesion resembling a hydatid cyst. Surgical excision was done without injuring the cyst. Diagnosis was confirmed on histo-pathological examination and was compatible with a hydatidcyst. Ahydatid cyst should be considered in the differential diagnosis of subcutaneous cystic lesions, it should be excised totally, with an intact wall and postoperative albendazole should be given to avoid recurrence.

**KEYWORDS:** Abdominal wall, solitary hydatid cyst, ultrasonography

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## INTRODUCTION

Hydatid disease is an infestation caused by the parasite *Echinococcus granulosus*.<sup>[1,2]</sup> The definitive hosts are canines; intermediate hosts are sheep, goats, cattle and humans. 70% of the larvae are trapped in the liver and those which pass through the hepatic filter disseminate to the lungs, heart and other organs. If the larvae pass through the first filter, they reach the lungs which are the second most frequently involved site (10-25%).<sup>[3]</sup> If they pass this second filter they cause hydatid disease in other organs. There are preliminary data on the possibility of dissemination through lymphatic channels. In this paper, we present a case in which a patient had a hydatid cyst at an uncommon site.<sup>[1,2]</sup>

## CASE REPORT

We are presenting a case from tertiary care centre from rural India. A 54-year-old female farm worker came with chief complaints of a painless mass [Figure 1] in left iliac fossa gradually increasing in size over 6 months. No history of previous surgery or hospitalisation was present. On clinical examination, a mass of 16 × 8 cm was noted in suprapubic region and left iliac

fossa, it was diagonally placed in lower abdomen. The swelling was smooth, bi-lobed with well defined margins, no change in dimensions on lying down position. It was cystic in consistency, not reducible, nor compressible, not freely mobile, fixed to pubic crest and was situated in parietal plane. The patient was non-vegetarian. On investigations complete blood counts were normal. USG of the abdomen showed a parietal wall cyst. Rest of the abdomen including liver was normal. Chest X-ray was also normal.

Surgery was planned. On exploration, a smooth cystic swelling was present in between left internal oblique and Transversusabdominis muscle, adhered to pubic bone inferiorly and peritoneum posteriorly by separating Transversusabdominis muscle [Figure 2]. The swelling was dissected carefully, adhered portion of transversusabdominis muscle and peritoneum was sacrificed. Defect in abdominal wall was repaired by hernioplasty using polypropylene mesh [Figure 3]; suction drain was kept *in situ* and the specimen [Figure 4] was sent for histopathology for the diagnosis of hydatid cyst and it was confirmed. The recovery of patient was uneventful. Patient was orally allowed after 48 hours. Parenteral antibiotics were given for 5 days; the drain was removed on 3<sup>rd</sup> day. The patient was adviced albendazole 400 mg BD for a period of one month and discharged after 8 days.

## DISCUSSION

Hydatid disease is endemic in cattle rearing regions, such as Central Europe, Mediterranean, Middle East, South



Figure 1: Abdominal wall hydatid

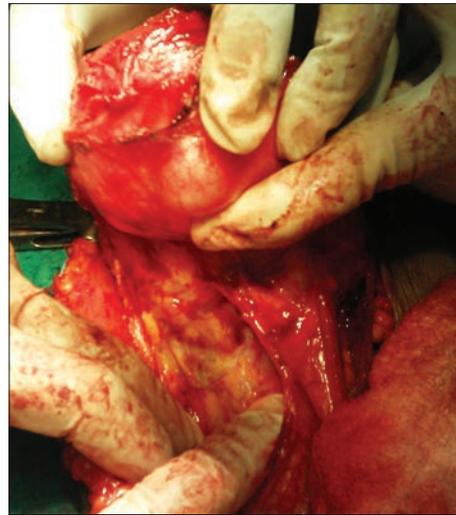


Figure 2: Intraoperative hydatid

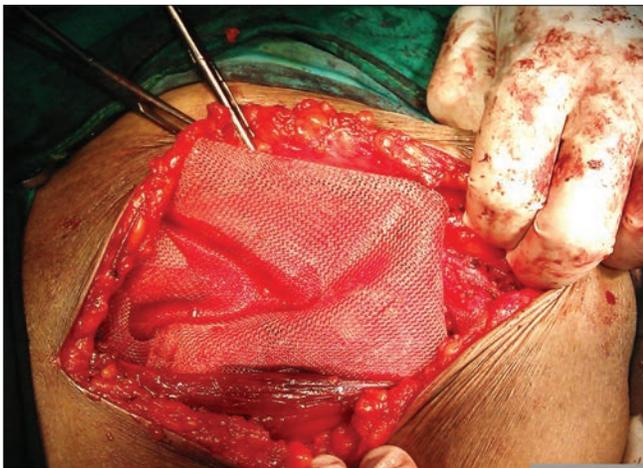


Figure 3: Hernioplasty done for abdominal wall defect



Figure 4: Excised hydatid cyst

America, Australia, New Zealand and South Africa. Lactic acid produced by the underlying muscles may assist in hatching of the ova, allowing the parasite embryos to form hydatid cysts. Clinically, a hydatid cyst in the soft tissues might mimic teratomas, abscesses, or fibromatosis. Ultrasound is an important imaging modality for hydatid disease and may clearly demonstrate the floating membranes and daughter cysts. Preoperative diagnosis of subcutaneous hydatid disease is also possible by FNAC.<sup>[1,2,4-6]</sup> Serology and radiological imaging establish the diagnosis in most of the cases. Serological test consists of immuno-electrophoresis, immuno-hemagglutination test and complement fixation test. Casoni test is not done now-a-days. A combination of investigations yields a diagnosis in only 50% of cases. Most widely used assay is Enzyme-linked immunosorbent assay (ELISA). Arc 5 immunoelectrophoresis is confirmatory test, It detects antibodies against immune-dominant and specific Antigen, antigen 5 of the cestode. For detecting the particular species of *Echinococcus* A polymerase chain reaction (PCR) is useful. Ultrasonography and computerized tomography (CT)

scan are good tools for diagnosis. CT scan is better than MRI. On changing the patient's posture under real time scanner, "falling snowflake pattern" of Hydatid sand can be seen.<sup>[5,7,8]</sup>

Hydatid disease is caused by *Echinococcus granulosus*. The adult parasite resides in the intestines of canines. The ova are ingested by the intermediate hosts, herbivores and humans. The ova hatch in the small intestine, and reach the liver via the portal vein. They are trapped in the sinusoids; therefore, the liver is the most frequently involved organ (70%). The larvae which pass through this first filter, reach the lung via the right heart. If they pass this second filter they cause hydatid disease in other organs. In addition, there are preliminary data on the possibility of dissemination through lymphatic channels. The interesting aspect of cases with solitary cysts in uncommon sites is the absence of disease in the liver and lungs. It is very possible that systemic dissemination via the lymphatic route accounts for cases with solitary cysts in uncommon sites.<sup>[1,2,8]</sup>

It rarely involves the brain, heart, bone or other organs.

However, a review of the English medical literature also revealed cases involving the muscles of the chest wall, Sartorius, biceps brachii, supraspinatus and gluteus. The clinical manifestation of the disease is formed by localization and pressure effect of the slowly growing cyst in the infected organ.<sup>[7]</sup> Hydatid disease should be considered in the differential diagnosis of all cystic masses in all anatomic locations especially in endemic areas.<sup>[9]</sup>

The best treatment option is total surgical excision without opening the cyst. En-bloc resection alone is curative for isolated muscular hydatid cysts but postoperative adjuvant therapy with albendazole is given. We did not use scolocidal agent for disinfecting the wound as there was no evidence or previous history of incisional biopsy of the lesion. The patient has to be kept on regular follow up paying attention to the possibility of complications.

## CONCLUSION

In conclusion, subcutaneous hydatid cyst is rare and should be kept in differential diagnosis of a cystic lesion especially in regions where hydatid disease is endemic. It is better not to biopsy the lesion if one suspects that it could be a hydatid cyst and should be excised totally to avoid recurrence.<sup>[4]</sup> We treated our patient with total cystectomy and postoperative albendazole therapy.

Care should be taken at the time of operation of cystic lesion situated anywhere in the body, to avoid accidental incision over the cyst, as there are chances of leak, anaphylactic shock, re-infection and dissemination of hydatid cyst. If it is proven radiologically it should be resected en-bloc without traumatizing

the cyst wall and postoperative albendazole should be given to prevent recurrence and further complications.

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