



Intraperitoneal Hydatid Cyst: A Rare Presentation

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Abstract

Primary peritoneal hydatidosis is a rare condition, even in endemic parts of the world, including Greece, where it has become an important public health problem. Hydatid disease (HD) is caused by *Echinococcus granulosus*, the definitive host is usually a dog. Humans accidentally get affected. Primarily, the most common location of hydatid cyst (HC) is the liver (50-60%) and the second most common location is the lung (10-30%). Intraperitoneal hydatid disease presents with signs and symptoms of abdominal pain, nausea, and vomiting but may get complicated and the mortality rate increases if the cyst ruptures. Hydatid cyst commonly affects the liver and lungs, but it can also be seen in the peritoneal cavity. Intraperitoneal hydatid cyst accounts for 10-16 %, mainly resulting due to rupture of a concomitant liver cyst and primary peritoneal cyst accounts for about 2% of all the abdominal hydatidosis. Presenting complaints are mainly due to the mass effect. We report a case of extrahepatic primary peritoneal hydatid cyst in a female patient who presented with a huge lump in the lower abdomen. Exploratory laparotomy and surgical

excision, and treatment with Albendazole in the postoperative period helped in effectively controlling the disease. Well-planned surgery remains the treatment of choice for large and symptomatic intraabdominal cysts.

Keywords: Hydatid disease, *Echinococcus granulosus*, Intraperitoneal hydatid cyst, Primary peritoneal hydatid cyst

Introduction

Primary peritoneal hydatidosis is a rare condition, even in endemic parts of the world, including Greece, where it has become an important public health problem.^[1] Hydatid disease (HD) is caused by *Echinococcus granulosus*; the definitive host is usually a dog, and sheep is an intermediate host. Humans accidentally get affected by ingesting vegetables or water contaminated by parasitic ova in dog faeces and thus, humans become intermediate hosts.^[2,3] Primarily, the most common location of hydatid cyst (HC) is the liver (50-60%) and the second most common location is the lung (10-30%). HC can also present, though not so common, in the

heart, muscles, peritoneum, spleen, pancreas, brain, kidneys, omentum, bones, and ovaries.^[4,5,6]

Intraoperative hydatid disease presents with signs and symptoms of abdominal pain, nausea, and vomiting but may get complicated and the mortality rate increases if the cyst ruptures.^[7]

We report a case of extrahepatic primary peritoneal hydatid cyst in a female patient who presented to surgery OPD with a huge lump in the lower abdomen. Exploratory laparotomy and surgical excision, and treatment with Albendazole in the postoperative period helped in effectively controlling the disease.

Case Report

A 55-year-old female presented to surgery OPD with complaints of a huge lump in the lower abdomen which was gradually increasing in size for the last 1 year. She also complained of dull aching pain which has been exacerbated for the last 2 months. Her bowel and bladder habits were normal. CECT of the abdomen was suggestive of multiple intraperitoneal hydatid cysts with daughter cyst almost completely filling the abdomen; largest measuring 20 x 15 x 12 cm, bilateral grade II hydronephrosis secondary to compression of mid ureters by hydatid cyst, and no hepatic or splenic cyst were noted. The chest radiograph was normal. Keeping hydatid disease and ovarian cyst as differential diagnoses, ovarian tumour markers were sent, which came out to be negative. Her preoperative creatinine was 1.9 mg/dl, hence bilateral DJ stents were inserted, and later on, the patient was posted for operative intervention. Antiparasitic treatment with Albendazole 400mg twice daily was given pre-operatively for 7 days. On exploratory laparotomy, there were multiple hydatid cysts (five in number), we could excise two cysts completely and the rest three cysts were deroofed

with excision of the germinal membrane, and omentoplasty was done. A pelvic drain was kept. The postoperative period was uneventful. The pelvic drain was removed on postoperative day 5. Antiparasitic treatment with Albendazole was given postoperatively for 3 months. Histopathology report was suggestive of cyst wall with laminated membrane. The germinal layer contained degenerated eosinophilic protoplasmic mass suggestive of a hydatid cyst.

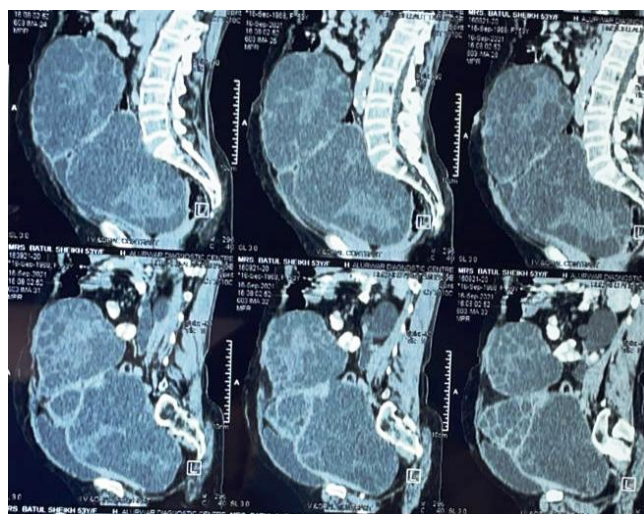


Figure 1: Sagittal section (CECT Abdomen) showing large hydatid cyst involving whole abdomen and pelvis

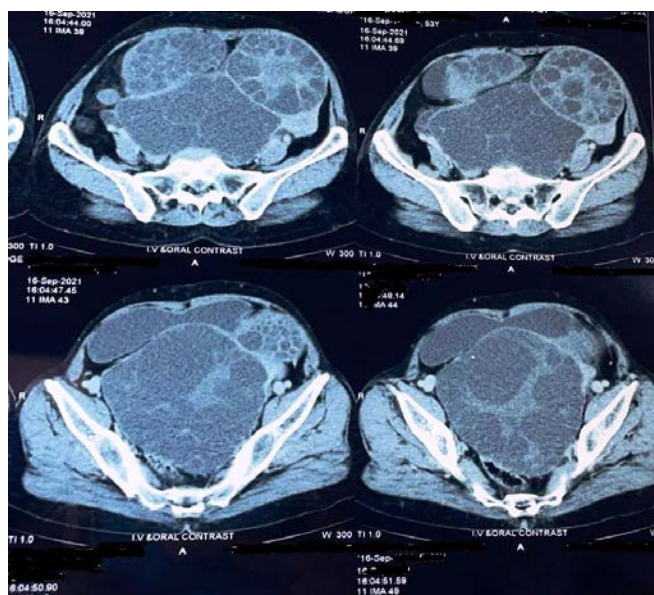


Figure 2: Transverse section (CECT Abdomen) showing hydatid cyst with daughter cysts



Figure 3: Intraoperative image showing hydatid cyst and daughter cysts

Discussion

Hydatid cyst commonly affects the liver and lungs, but it can also be seen in the peritoneal cavity. Peritoneal cavity cyst accounts for 10-16 %, mainly resulting due to rupture of the concomitant liver cyst,^[8] and primary peritoneal cyst accounts for about 2% of all the abdominal hydatidosis.^[9] Presenting complaints are mainly due to the mass effect of the enlarging abdominal cyst. Abdominal ultrasound and computed tomography help in confirming the diagnosis which is complimented by tests like complement fixation test, indirect haemagglutination test, and ELISA. In hydatid disease, administration of Albendazole in the pre- and post-operative period prevents the dissemination of protoscolices via the bloodstream, sterilizes the cyst, decreases the chance of anaphylaxis, and thus reduces the recurrence rates. The main goal of surgery is to eliminate the local disease, prevent complications, and reduce the recurrence of the disease. Surgical treatment consists of the evacuation of the hydatid cyst content followed by wide de-roofing of the cyst, leaving the cyst open or total removal of the cyst.^[10,11]

Intraoperative scolicedal agent kills daughter cyst, thus helping in preventing anaphylaxis.

Well-planned surgery remains the treatment of choice for large and symptomatic intraabdominal cysts.

Conclusion

Abdominal hydatid disease is a rare entity. This case illustrates that echinococcal disease should be considered as a differential diagnosis of every cystic mass in any anatomical location, especially when they occur in areas where the disease is endemic. Surgical excision remains the treatment of choice with post-operative treatment with Albendazole to prevent a recurrence.

Abbreviations

HD: Hydatid Disease

HC: Hydatid Cyst

DJ: Double J

OPD: Outpatient Department

CECT: Contrast-Enhanced Computed Tomography

ELISA: Enzyme-Linked Immunoassay

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