



PRIMARY PERITONEAL HYDATID CYST PRESENTING AS MESENTERIC CYST - A RARE CASE REPORT

Surgery

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ABSTRACT

Hydatid disease (HD) is caused by *Echinococcus granulosus* and is endemic in many parts of the world. This parasitic tapeworm can produce cysts in almost every organ of the body, with the liver and lung being the most frequently targeted organs. Peritoneum, omentum, and mesentery are among these unusual locations, which can cause diagnostic challenge and treatment delay. This Case report presented the different way of presentation of hydatid cyst as peritoneal, omental, and mesenteric hydatid cyst.

KEYWORDS

Primary Hydatid Cyst; Peritoneal; *Echinococcus Granulosus*

INTRODUCTION

Hydatid cyst disease is a zoonotic disease caused by *Echinococcus granulosus*, *E. multilocularis* or *E. vogli*. The most common primary site is liver (75%) followed by lungs (5-15%) and other organs constitute 10-20%. Peritoneal hydatid cysts are very rare especially primary peritoneal hydatid. Secondary peritoneal hydatid cysts are relatively common, which usually occurs due to rupture of primary hepatic hydatid cyst. (Karavias, Vagianos, Kakkos, Panagopoulos, & Androulakis, 1996) We present a rare case of large primary peritoneal hydatid cyst misdiagnosed as mesenteric cyst underwent Laparoscopy with cyst excision and postoperative Albendazole therapy.

CASE REPORT

A 28-year-old man was referred to us with history of pain and swelling in left iliac fossae for 2 yrs. The swelling was gradually rising. Pain was dull aching in nature, neither referred nor radiating. Pain was not associated with bowel or bladder habit alteration. No history of weight loss, loss of appetite or fever. Patient's past and family history was not significant. On examination Pulse: 76/min, BP: 120/78 mm of Hg. Physical examination carried out did not show any positive signs on general examination. Skin was normal. No pallor or lymphadenopathy. On examination of abdomen vague lump was palpable in left iliac fossae of approximately five by six cm in size which mobile & non tender. There was no impulse on cough. There was no visceromegaly or free fluid, bowel sounds were normal. Ultrasonography of abdomen was done in peripheral centre stating cyst in left iliac fossae in the mesentery of sigmoid colon (5 X 5 cm in size). Laboratory investigation including complete blood count, serum electrolytes, renal function tests, liver function tests and coagulation tests were carried out. All blood investigations were within normal limits. Hydatid serology was done which was negative. CECT abdomen was done which was suggestive of normal liver, spleen, kidneys, small bowels and no ascites. A multiseptated cyst located in mesentery of sigmoid colon with possibility of hydatid cyst / Mesenteric cyst of five by 5 cm in size. Patient was started on pre operatively prophylactic Albendazole therapy and later posted for Laparoscopic excision of cyst. In surgery (Figure 1) dense omental adhesions were released by sharp dissection and entire cyst was excised in total. Liver and spleen was found to be normal. (Figure 2) Specimen (entire cyst) was delivered in endo bag via umbilical port site without spillage of its contents. On gross examination after cutting the cyst multiple daughter cysts were seen in the cavity. (Figure 3) Histopathology confirmed the diagnosis of hydatid cyst. Recovery of the patient was uneventful in post-operative period and he was started on oral diet on day 1 following surgery and discharged on post-operative day 3. Patient was started on oral Albendazole 800mg /day in divided doses for 3 months with one week's gap after 3 weeks treatment. At 3 years follow-up patient was asymptomatic and his review ultrasound abdomen and pelvis was normal.

DISCUSSION

Hydatid cyst disease is a zoonotic disease which can involve any abdominal organ. Hydatid cyst in humans is usually caused by the larval stage of *Echinococcus granulosus*. Its life cycle passes through two definitive hosts (dogs and carnivores); humans become an

accidental intermediate host. Peritoneal hydatidosis occurs in 2% of abdominal hydatid (Karavias et al., 1996). The most common presentation of peritoneal hydatid cyst is chronic abdominal pain, unless there are complications in the cyst. The common complications are hydatid peritonitis and systemic anaphylaxis due to cyst rupture, infection of cyst and compression of adjacent organs. Hydatid cyst at unusual body sites heart, orbit, brain, muscle, salivary gland, bone, urinary tract and pancreas are reported. (Gandhiraman, Balakrishnan, & Rathna Ramamoorthy, 2015) The incubation period for all species of *Echinococcus* can be months to years or even decades. (Kemp & Roberts, 2001) In human beings hydatid disease most commonly presents as cystic disease. Hydatid disease of the peritoneum is usually secondary to hepatic or splenic involvement in the disease. Primary peritoneal infection with *E. granulosus* accounts for around 2% of reported cases. (Hegde & Hiremath, 2013) The low prevalence of primary peritoneal infection may be assumed to be due to the physical barriers to the hematogenous diffusion of cysts created by the liver and lungs, which are the major primary sites for the disease in adults. (Erikci, Hoşgör, & Aksoy, 2014) The symptoms and signs that occur depend on the location of the cyst and its size. Most of the liver or lung hydatid cysts are asymptomatic and they are incidentally detected. Imaging is the main method that is relied on for diagnosis, while serologic tests are used to complement the imaging results. The imaging technique of choice for cystic echinococcosis is ultrasonography. (Brunetti, Kern, & Vuitton, 2010) In addition to ultrasonography, both MRI and CT scans are often used, although an MRI is preferred to CT scans when diagnosing cystic echinococcosis since it gives better visualisation of liquid areas within the tissue. (Macpherson & Milner, 2003) Ultrasound is more specific for diagnosis of cystic echinococcosis. The treatment of choice is a careful complete open surgical excision of cyst combined with chemotherapy using Albendazole before and after surgery. In our patient the exact nature of the cyst was not picked up by ultrasonography, it was not associated with any other lesion. CT scan suggested one possibility of hydatid cyst; hence patient was started with antihelminthic treatment pre operatively and then operated for the same.

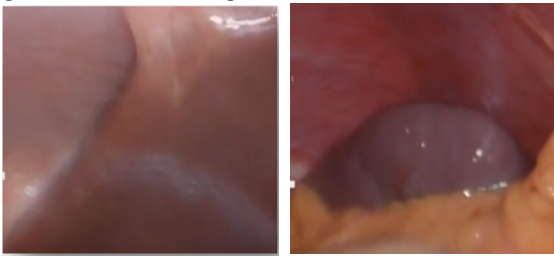
CONCLUSION

When hydatid disease affects rare sites, the diagnosis is usually missed. A high index of suspicion, radiological investigation as well as histopathological examination is necessary in establishing the diagnosis of hydatid disease at unusual locations.

Figure Legends:

Figure: 1 Peritoneal adhesions with cyst



Figure: 2 Normal Liver & Spleen**Figure: 3 Specimens****References**

1. Brunetti, E., Kern, P., & Vuitton, D. A. (2010). Expert consensus for the diagnosis and treatment of cystic and alveolar echinococcosis in humans. *Acta tropica*, 114(1), 1-16.
2. Eriki, V., Hoşgör, M., & Aksoy, N. (2014). Primary abdominal wall hydatid cyst: a case report. *Turkish Journal of Pediatrics*, 56(2), 183-185.
3. Gandhiraman, K., Balakrishnan, R., & Rathna Ramamoorthy, R. R. (2015). Primary peritoneal hydatid cyst presenting as ovarian cyst torsion: A rare case report. *Journal of clinical and diagnostic research: JCDR*, 9(8), QD07.
4. Hegde, N., & Hiremath, B. (2013). Case Report: Primary peritoneal hydatidosis. *BMJ case reports*, 2013.
5. Karavias, D. D., Vagianos, C. E., Kakkos, S. K., Panagopoulos, C. M., & Androulakis, J. A. (1996). Peritoneal echinococcosis. *World journal of surgery*, 20(3), 337-340.
6. Kemp, C., & Roberts, A. (2001). Infectious diseases: echinococcosis (hydatid disease). *Journal of the American Academy of Nurse Practitioners*, 13(8), 346-347.
7. Macpherson, C. N., & Milner, R. (2003). Performance characteristics and quality control of community based ultrasound surveys for cystic and alveolar echinococcosis. *Acta tropica*, 85(2), 203-209.