Rare disease

Disseminated intra-abdominal hydatidosis causing acute intestinal obstruction—a rare presentation

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Summary

Hydatid disease is caused by *Echinococcus granulosus*—a parasitic infestation commonly affecting the liver. Disseminated intra-abdominal hydatid disease may occur following the rupture of the hydatid cyst into the peritoneal cavity causing secondary echinococcosis. We report a very rare case of disseminated hydatidosis involving various abdominal and pelvic organs and causing intestinal obstruction in a female patient. This unusual presentation produced a diagnostic dilemma.

BACKGROUND

Hydatid disease is caused by the parasite *E granulosus*. Although the disease can occur anywhere, the most frequently involved organs are the liver (55–60%) followed by the lung (30%).¹

Hydatid disease may be asymptomatic or present with complications. Sometimes unusual locations as well as cyst metastasis can produce a diagnostic dilemma.

The purpose of this paper is to emphasise the fact that hydatid disease can involve any organ of the body and can have an unusual presentation; therefore, a high index of suspicion and correct diagnosis is justified in order to prevent complications and chances of recurrence.

CASE PRESENTATION

A 16-year-old female patient presented to casualty with complaints of pain and distention of the abdomen. The pain was gradual in onset, moderate in intensity, intermittent in nature and gradually became severe followed by distention of the abdomen and inability to pass flatus.

On examination, the patient was distressed and pale although the vitals were stable. A soft cystic mass 8 × 8 cm tender and mobile was palpable in the epigastrium and the right hypochondrium. On deep palpation, a few irregular hypogastric masses were also felt.

INVESTIGATIONS

Haematological investigations showed anaemia with mild eosinophilia. Ultrasonography of the abdomen revealed a cystic mass with honeycomb appearances with mobile matrix and a few calcific foci within it occupying the abdomen and pelvis. The mass was reported as a hydatid cyst with multiple daughter cysts.

TREATMENT

The patient was planned for an emergency laparotomy. Pre-operative findings included multiple cysts in the omentum varying from 0.5–6.2 cm. Cysts were also present in the spleen, bilateral ovaries, over the surface of the uterus and adhered to the sigmoid colon producing obstruction (figure 1).

The surgical management included omentectomy, partial splenectomy, pericystectomy with removal of adhesions between cyst and sigmoid colon, and bilateral salpingo-oophorectomy. Most of the cysts amenable for surgery were removed from the abdominal cavity. The surgical field was washed with hypertonic saline and povidone iodine.

Histopathological examination revealed the cyst wall composed of a laminated layer and pericystic layer (figure 2). Brood capsules and scoleces were also identified (figures 3–4). Parasitic cysts were also confirmed in the bilateral ovaries, fallopian tubes, spleen, omentum and liver.

OUTCOME AND FOLLOW-UP

On the basis of the histopathology report, postoperative praziquantel and albendazole were given for 2 weeks and albendazole was continued for a further 6 months.

DISCUSSION

Hydatid disease in a zoonosis is caused by the cystic stage of the parasite *E granulosus*. Hydatid disease is endemic in sheep farming and cattle farming areas of Asia, North and East Africa, South America, Australia and the Middle East.² Dogs and other carnivorous animals are definitive hosts, while sheep, cattle, horses and goats are intermediate host. Humans are an accidental and dead-end intermediate host. Humans acquire infection through contact with a definitive host or by consuming contaminated water or food. Apart from the common sites such as liver (55–60%) and lungs (30%), hydatid cysts can present at unusual sites, which include kidney (2.5%), heart (2.5%), bones (2%), muscles (1%), brain (0.5%)¹ and spleen (1.5%).

Other rare sites include omentum, ovaries, parametrium, pelvis, thyroid, orbit and retroperitoneum.¹ Clinical presentation of hydatid disease depends on the site of the lesion. Hydatid disease may present with complications inducing rupture of the cyst leading to anaphylactic shock or formation of localised or generalised 2^o echinococcosis.³ Ultrasonography and CT scan are helpful in the pre-operative diagnosis of a hydatid cyst. Serological tests, such as immunoelectrophoresis, ELISA, latex agglutination and indirect

Figure 1 Gross picture of hydatid cysts involving various organs, such as the omentum, uterus cervix, and so forth, and the separately sent cyst wall.

Figure 2 Layers of cyst wall, including inner laminated layer and outer pericystic layer. Parasitic scolex is shown by an arrow.

Figure 3 Parasitic scolex present within the lumen of blood vessel.

Figure 4 High power (40 $\times$) view of scolex of *Echinococcus granulosus*.

haemagglutination test, etc are supportive. The principal treatment is surgical. However pre- and postoperative courses of albendazole and praziquantel should be considered in order to sterilise the cyst and, thus, reduce the chances of anaphylaxis and recurrence.

Learning points

- ▶ Hydatid cysts can affect any organ in the body. Unusual locations and clinical presentations may pose diagnostic and therapeutic challenges; therefore, a high index of suspicion of this disease is justified in any cystic lesion of any organ of the body especially in endemic regions.
- ▶ Medical treatment should proceed and follow the surgical intervention in order to prevent complications and recurrences.

Competing interests None.

Patient consent Obtained.

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Please cite this article as follows (you will need to access the article online to obtain the date of publication).

Goel MM, Verma N, Sagar M. Disseminated intra-abdominal hydatidosis causing acute intestinal obstruction—a rare presentation. *BMJ Case Reports* 2010; 10.1136/bcr.06.2010.3066, date of publication

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