

CASE REPORTS

PERITONEAL HYDATIDOSIS IN A YOUNG GIRL

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SUMMARY

We report a case of peritoneal hydatidosis that occurred post laparotomy. Patient was diagnosed nine months after she had laparotomy for suspected acute appendicitis. The whole peritoneal cavity was studded with cysts. In view of diffuse involvement, patient was managed conservatively and showed response to medical therapy.

Keywords: Hydatidosis, Peritoneum, Endemic, Conservative management

INTRODUCTION

Peritoneal hydatidosis is a rare localisation of hydatid disease. Even in endemic areas, peritoneal echinococcosis is uncommon, has been reported to occur in only 2 percent of all abdominal hydatid disease cases.¹ The overall prevalence of peritoneal involvement in cases of abdominal hydatid disease is approximately 13%. Most of cases are secondary to a hydatid cyst of the liver.

This form of hydatosis represents significant manifestation of disease². Its primitive form is considered due to a haematogenous diffusion whereas the occurrence of secondary echinococcosis is possible in the pleural cavity, but to a lesser degree than in the peritoneal cavity.

CASE REPORT

An 11 year old female presented with recurrent abdominal pain, weight loss and generalized weakness of 4 months duration. There was no history of vomiting, constipation or jaundice.

Nine (9) months earlier she had been seen with pain in the right lower abdomen, fever and anorexia and the diffuse abdominal tenderness and guarding. Ultrasonography documented probe tenderness and the presence of free fluid in the peritoneal cavity but no evidence of hydatid disease in the abdominal cavity. She underwent laparotomy for suspected perforated appendicitis but final diagnosis was primary peritonitis.

Histopathology of the appendix at that time was normal.

On general physical examination a pulse of 90beats/minute and blood pressure of 100/70 mm Hg. was recorded. Systemic examination was normal. Abdominal examination revealed a longitudinal scar, soft and non tender on palpation with no organomegaly. Bowel sounds were normal.

Hemoglobin of 9.4 gm/dl, leucocyte count of 7,000 /mm³ and no eosinophilia with ESR of 40 mm/hr was noted. Liver function tests were normal. ELISA for hydatid disease was positive with a titer of more than 1:80. Chest X-ray was normal. Upright X-ray of the abdomen could not reveal any significant finding.

Ultrasonography of the abdomen showed multiple cysts present throughout the abdomen, liver and mesentery. Computed tomography scan of the abdomen revealed a liver studded with small multiple hydatid cysts and multiple cysts throughout the peritoneal cavity (Figure 1).



Figure 1 CT Scan abdomen showing multiple hydatid cysts spread in the abdominal cavity

Patient was managed conservatively and was put on two courses of 4 weeks of Albendazole (15 mg/kg/day) given with an interval of one month. She responded well with decreasing size of cysts seen on follow up serial ultrasonography and is attending our follow up clinics.

DISCUSSION

Peritoneal cavity involvement in hydatid disease is found in 10 to 16 % of cases.³ Peritoneal hydatidosis could be either primary or more frequently secondary to hydatid cysts in the liver or rarely in the spleen and is almost always secondary to hepatic disease, although some unusual cases of primary peritoneal hydatidosis have been described.⁴ Most of the cases of peritoneal hydatid disease are secondary to previous surgery for liver hydatidosis. Intraperitoneal rupture of hepatic or splenic cysts results in release of brood's capsule, scolices and daughter cysts which implant and develop independently leading to multiple disseminated intraperitoneal hydatid disease, this phenomenon is called secondary echinococcosis.⁵

The mechanism of peritoneal infestation is not clear. Dissemination via lymphatics or systemic circulation has been implicated as a possible route to produce primary hydatid disease outside the liver or lungs^{6,7} however, spontaneous microrupture of a hepatic cyst into peritoneum has also been reported.⁸ The incidence of secondary hydatidosis resulting from cyst fluid spillage during surgery has been reported to be 2 to 25% in different series.⁹ Peritoneal involvement is usually undetected unless cysts are large enough to cause symptoms.

The principal symptoms are unusual abdominal pain and abdominal swelling with masses. The presenting symptoms are mostly atypical and a few cases were discovered accidentally during routine follow-up after operations for hepatic echinococcosis. Serological tests and radiological imaging allow diagnosis of hydatid disease and are useful in assessing response to therapy.

Accurate and rapid diagnosis of peritoneal hydatid disease is possible because of the availability of modern imaging techniques and the surgical procedures are decided on radiological findings. Ultrasound scan and computed tomography scan are the radiological methods of choice for assessing the number of hydatid cysts in the abdomen and assessing the changes in size, number and density of lesions in response to drug therapy.¹⁰

Computed tomography scan enables wider field of view and better delineation of extent of disease as well as cyst wall and demonstrates best cyst wall calcification and cyst infection.¹¹ Thickening, calcification of wall, reduction in size and number of cysts are taken as therapeutic response on follow up computed tomography scan. Surgery remains the best curative or palliative treatment for peritoneal echinococcosis, although anthelmintics are considered

effective alternative for the treatment of small and asymptomatic cysts. Surgical removal of the cyst is customized to each patient depending on the patient's general condition, the number and localization of cysts, and the surgeon's expertise. Surgical cure is to be completed by pharmacologic treatment with the aim of avoiding a relapse.

CONCLUSION

In our case, surgery would have resulted in rupture of hydatid microcyst at some sites in the peritoneal cavity that might lead to diffuse peritoneal hydatidosis.

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