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Unveiling the Unusual: Case report on Intraperitoneal Hydatid Cyst Presenting with Hepatomegaly

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Abstract

This a case of a 53-year-old female presenting with a 1-month history of abdominal pain and mass per abdomen. Imaging revealed a large, multilocular cystic lesion with calcified walls, suggestive of an intraperitoneal hydatid cyst. The patient underwent exploratory laparotomy and surgical excision of the cyst, which weighed 1.4 kg and contained multiple daughter cysts. Preoperatively, the patient was started on Tab. Albendazole 400 mg twice daily for 1 month. Histopathological examination confirmed the diagnosis of hydatid cyst. This case underscores the need for early recognition and surgical intervention in the management of intraperitoneal hydatid cysts, a rare but important cause of abdominal masses.

Keywords: Hydatid cyst, intraperitoneal hydatid, daughter cysts, abdominal mass.

Introduction

Hydatid disease, caused by the tapeworm Echinococcus, typically affects the liver and lungs, but it can also involve other organs, including the peritoneal cavity. [1]Intraperitoneal hydatid cysts are uncommon and present a diagnostic challenge. Although hydatid cysts most frequently involve the liver, their presentation as large, cystic masses in the abdomen should prompt consideration of this diagnosis. This case presents a rare instance of an intraperitoneal hydatid cyst in a 53-year-old female, diagnosed through imaging and histopathology, with successful surgical management.

Case Report

A 53-year-old female presented to the outpatient clinic with a 1-month history of dull, aching abdominal pain, localised to the upper abdomen. She also reported a progressively enlarging abdominal mass over the past month. There were no associated symptoms such as nausea, vomiting, weight loss, or fever. The patient is a known case of Type 2 Diabetes mellitus and

Hypertension on treatment, and there was no family history of malignancy.

Patient gives the history of owning a pet dog that has been fully vaccinated.

Physical Examination

On examination, the patient appeared well-nourished and afebrile. Vitals were within normal limits. The abdominal examination revealed a large, firm, solitary mass occupying the right and left hypochondrium, epigastrium and extending up to the umbilical region. The mass was approximately 25 cm in length and 15 cm in width, with rounded lower borders; the superior border was under the costal margin. Hepatomegaly was also noted, with the liver palpable 4 cm below the costal margin.

Investigations

Initial laboratory tests showed mild elevations in liver enzymes (AST, ALT) and a slightly elevated white blood cell count. Routine blood tests, including complete blood count (CBC) and renal function tests, were within normal limits.

Figure 1 a: Sagittal Section showing Intraperitoneal Hydatid Cyst

1b: Coronal section showing Hydatid cyst abutting and almost replacing left lobe of liver

Imaging

A contrast-enhanced computed tomography (CT) scan of the abdomen was performed, which revealed a large, thick-walled, multiseptated cystic lesion measuring 10.5 x 13.6 x 12.6 cm (AP x TR x CC) in the epigastric region. (Figure 1. a and b) The lesion exhibited calcifications in the lower part of the wall, with mild enhancement of the wall and septa. No solid components were identified. The lesion extended superiorly to both diaphragmatic domes, inferiorly indenting the transverse colon, laterally indenting the left lobe of the liver and gallbladder, and posteriorly indenting the pancreas.

Diagnosis

Based on the CT imaging findings of multilocularity, wall calcifications, and septal enhancement raised suspicion for an intraperitoneal hydatid cyst.

Preoperative Management

Given the suspected diagnosis of a hydatid cyst, Tab. Albendazole 400 mg twice daily was initiated preoperatively to reduce the risk of secondary hydatid cysts and to prepare the patient for surgery.

Intraoperative Findings

A chevron incision was made for adequate exposure of the abdominal cavity. Upon exploration, a large, partly calcified cystic mass was encountered in the epigastric

region, nearly replacing the left lobe of the liver. The mass was adherent to the lesser curvature of the stomach and transverse colon, and was abutting on to the superior surface of head of the pancreas. Mass was adherent to the inferior surface of the diaphragm near the oesophageal hiatus. Peri-cystectomy with excision of atrophied segments 3 and 4. The rest of the peritoneal cavity was explored for any daughter cyst and was found to be normal. After Saline wash was given, and careful examination of the raw surface of the liver, no bile leak or communication was noted. The raw area over the liver was covered with omentum, and an omentoplasty was performed. An abdominal drain was placed in the epigastrium, and the abdomen was closed in layers.

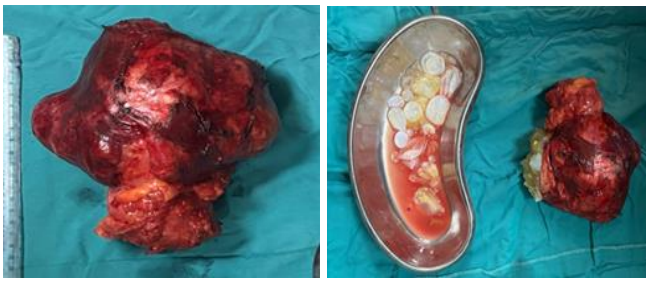

Figure 2 a and b: Gross specimen of the excised mass

The excised specimen weighed 1.4 kg and measured 22 cm in length and 15 cm in width. Upon cutting the specimen, multiple daughter cysts were observed within the larger cyst, which is characteristic of hydatid disease. (Figure 2 a and b)

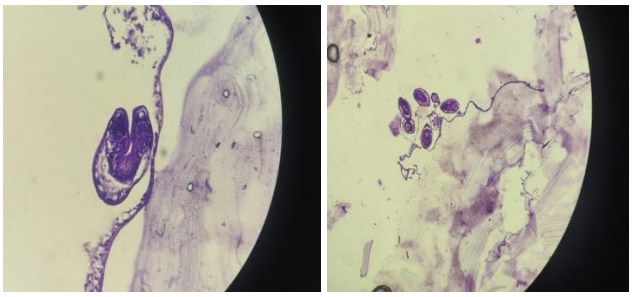

Figure 3 a and b: Slides showing germinal membrane with nucleated lining and protocolises attached to the membrane and budding from it. Daughter cysts with proboscises and contain refractile hooklets with sucker.

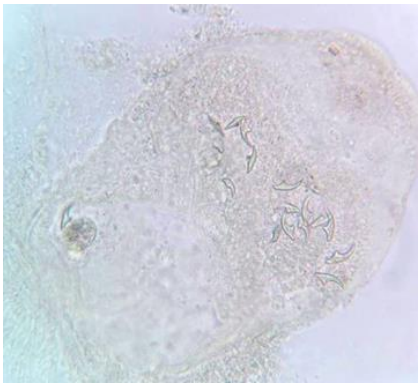

Figure 4: Slide Demonstrating of hooklets in hydatid fluid

Histopathological examination confirmed the diagnosis of intraperitoneal hydatid cyst, with the presence of laminated membranes and daughter cysts consistent with this parasitic infection. (Figure 3 and 4)

Management and Outcome

Patient withstood the procedure well and postoperative day 5 wound was reviewed and Abdominal Drain was removed.

Patient was prescribed, Tab. Albendazole 400 mg twice daily for 3 weeks.

Discussion

Echinococcus granuloses most commonly cause hydatid disease and affects the liver and lungs. Peritoneal hydatid cysts are rare but can present as large cystic masses. In endemic areas, hydatid disease should be considered in the differential diagnosis of abdominal masses. Intraperitoneal hydatid cysts can be complicated by infection, rupture, or pressure on adjacent structures.[2,3]

In this case, the cystic lesion exhibited features consistent with hydatid disease, including the presence of multiple daughter cysts. Combining CT imaging findings, surgical exploration, and histopathological

confirmation facilitated an accurate diagnosis. Surgical excision of the cyst was performed, and the patient was treated with antiparasitic medication to prevent recurrence.

Conclusion

Intraperitoneal hydatid cysts, though rare, should be considered in the differential diagnosis of large abdominal cystic masses. Imaging studies, surgical exploration, and histopathological examination are essential in confirming the diagnosis. Surgical excision remains the treatment of choice, and antiparasitic therapy, such as Albendazole, should be considered both preoperatively and postoperatively to prevent recurrence.[4,5]

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