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CASE REPORT

Rare Coexistence of Hepatic and Mesenteric Hydatid Cysts: Case Report

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ABSTRACT

Medicine is an 'Art & a Science' was the first thing that we were taught in Medical College UG curriculum. However, as we moved along, the thrust of the teaching was only on the science part of Medicine. The art part of Medicine was never taught in a structured manner. So, half of Medicine was actually not, part of the curriculum. It was learnt by observing our teachers & seniors. The sad part is that over the decades, the art of Medicine appears to have faded away or may be, it has acquired a different colour. Both the components of Medicine (Art & Science) are dynamic. They are expected to change with the passage of time & the ever-changing world. We need to examine their journey across decades to see if there is a conscious need for some course correction. The authors have, out of their experiences & observations, divided the study into 3 phases – the past (i.e., the last 2-3 decades of the last millennium), the present (i.e., the first 2-3 decades of the present millennium) and the future (i.e., the subsequent decades yet to come). Of course, there are overlaps but they are being ignored for the sake of simplicity.

KEYWORDS

• Medical ethics • Past • Present • Future • Patient autonomy • Beneficence, non-maleficence • Justice confidentiality • Artificial intelligence • Personalized medicine • Doctor-patient relationship

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INTRODUCTION

Hydatid disease is a parasitic infection caused by Echinococcus granulosus or Echinococcus multilocularis, commonly affecting the liver and lungs. However, the simultaneous occurrence of hepatic and mesenteric hydatid cysts is exceedingly rare.[1] The liver is the primary site of infection, with hydatid cysts predominantly developing in the right lobe. In contrast, mesenteric involvement is uncommon and occurs due to secondary dissemination, either via direct extension or hematogenous spread.[2] The clinical presentation of hydatid disease varies widely, ranging from asymptomatic cysts to complications such as rupture, secondary infection, or mass effect.[3] The diagnosis of hydatid disease relies on a combination of imaging studies and serology. Contrast- enhanced computed tomography (CECT) plays a crucial role in identifying cystic lesions with characteristic features such as daughter cysts, calcifications, and septations.[4] While serological tests can support the diagnosis, imaging remains the primary diagnostic modality. Management typically involves surgical excision or percutaneous aspiration techniques, with albendazole therapy used as an adjunct to prevent recurrence.[5] In this report, we present a rare case of a 38-year-old male with concurrent hepatic and mesenteric hydatid cysts, successfully treated with laparoscopic excision and drainage. This case emphasizes the importance of considering hydatid disease in patients presenting with cystic abdominal lesions, particularly in endemic regions, and highlights the role of minimally invasive surgery in managing complex hydatid disease.

CASE REPORT

A 38-year-old male presented with a 3-month history of right upper quadrant and epigastric abdominal pain. The pain was dull, non-radiating, and gradually progressive. There was no history of fever, bladder irregularities, nausea or vomiting. On examination he was conscious and oriented, with vitals within normal limits and localised tenderness in the right upper quadrant. CECT abdomen revealed a hypodense cyst measuring 8 cm × 6 cm × 4.3 cm in segment VIII of the liver with peripheral calcification, suggestive of a hydatid cyst, along with a well-defined hypodense cystic lesion in the mesentery measuring 4.2 cm × 4.7 cm.[3] Routine blood investigations were within normal limits, except for a mildly elevated SGPT (ALT) level. The patient underwent diagnostic laparoscopy with subadventitial pericystectomy and in toto excision of a 6 cm × 5 cm mesenteric hydatid cyst. Intraoperative findings confirmed the presence of a liver hydatid cyst in segment VIII, with no spillage or enlarged lymph nodes. Histopathology confirmed hydatid cysts with protoscolices and a laminated hyalinized middle layer[4] The postoperative course was uneventful, with the patient tolerating an oral diet and passing stool normally. He was discharged in stable condition. This case highlights the rare coexistence of hepatic and mesenteric hydatid cysts, successfully diagnosed through imaging and histopathology and managed via minimally invasive surgical excision.

DISCUSSION

Mesenteric hydatid cyst is a rare presentation of Echinococcus granulosus infection, whichprimarily affects the liver (75%) and lungs (15%), with abdominal involvement being uncommon[2]. First described by Rudolf Virchow, mesenteric hydatid disease accounts for less than 1% of all cases of hydatidosis[1]. It typically results from the spillage of larval cysts from a primary hepatic or splenic hydatid cyst or via hematogenous or lymphatic spread[3]. The clinical presentation of mesenteric hydatid cysts is nonspecific, leading to difficulties in preoperative diagnosis. Patients may present with gradual abdominal distension, vague abdominal pain, or an asymptomatic mass detected incidentally during imaging or surgery[5].Our patient also had similar complaints of abdominal swelling and intermittent pain, with no history of fever, weight loss, or gastrointestinal disturbances. In some cases, cyst rupture can cause anaphylaxis, secondary hydatidosis, or peritonitis, though our patient did not exhibit these complications.[4] Hydatid cysts are slow- growing, and their incidence is higher in individuals with exposure to livestock, particularly in sheep-rearing areas.[2] The hydatid cyst wall consists of three layers: the outer pericyst (host-derived fibrous capsule), the middle laminated membrane, and the inner germinal layer, which produces daughter cysts.[3] The preoperative diagnosis of mesenteric hydatid cysts is challenging due to their rarity and non-specific symptoms.

Imaging plays a crucial role in diagnosis.

- **Ultrasound (USG):** Findings vary depending on the cyst stage and may show multiloculated cystic lesions with daughter cysts or a hypoechoic lesion with internal echoes. The "water lily sign" or floating membrane sign is suggestive of hydatid disease.[5]
- **CT Scan (Contrast-Enhanced):** The gold standard, providing information on cyst size, number, and relation to surrounding structures. Our patient's CT scan revealed a large cystic lesion with multiple daughter cysts within the mesentery, highly suggestive of hydatid disease.[3]
- **Serological tests (ELISA, indirect hemagglutination):** Helpful for confirmation but can be falsely negative in isolated abdominal hydatidosis.[4]

Surgical excision remains the definitive treatment formesenteric hydatid cysts. Laparoscopic or open cystectomy can be performed, with special precautions to prevent spillage, as rupture can lead to secondary peritoneal hydatidosis. Hypertonic saline or 20% scolicidalagents should be used intraoperatively to inactivate protoscolices.[2] In our case, a careful laparoscopic excision was performed, ensuring atraumatic handling and complete cyst removal, avoiding rupture or dissemination. Post-operatively, albendazole therapy is recommended for at least 3 months to prevent recurrence. Long-term follow-up with serial imaging and serology is necessary to monitor for relapse.[5]

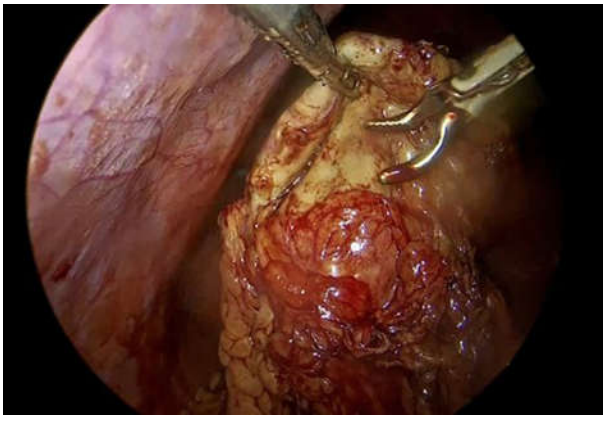

Fig. 1: Cystis meticulously separated from the mesentery using bipolar

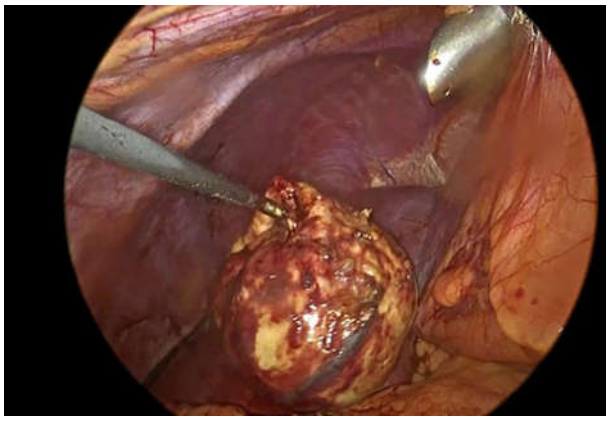

Fig. 2:

CONCLUSION

Mesenteric hydatid cyst is a rare but important differential diagnosis for an intra-abdominal cystic mass,especially in endemic regions. Duetoits non specific symptoms, it can be misdiagnosed as other abdominal pathologies, making preoperative imaging with ultrasound and CT scan essential for accurate diagnosis. Surgical excision remains the gold standard treatment, with careful handling to prevent cystrupture and secondary peritoneal hydatidosis. In our opinion, any patient presenting with an intra-abdominal cystic mass, particularly in endemic areas, should undergo thorough imaging and serological evaluation to confirm the diagnosis and plan appropriate surgical management. Laparoscopic surgery offers advantages in terms of faster recovery and minimal invasiveness but should only be attempted by experienced surgeons to prevent intra operative spillage and recurrence.

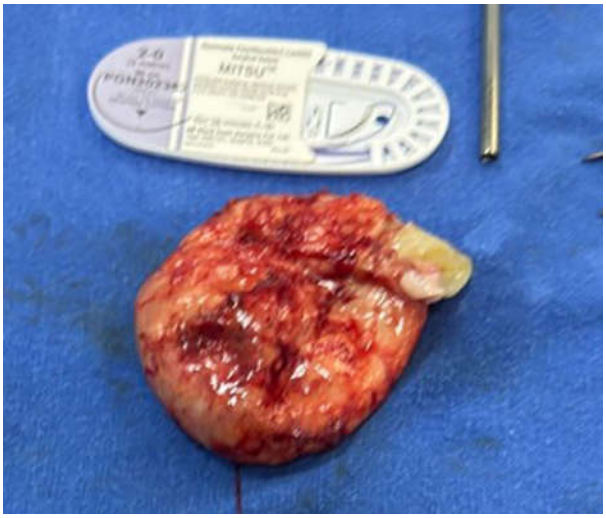

Fig. 3: Into to Excision of Hydatid cyst using Ednobag

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