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Hydatid Cyst of the Spleen: Unveiling a Rare Case

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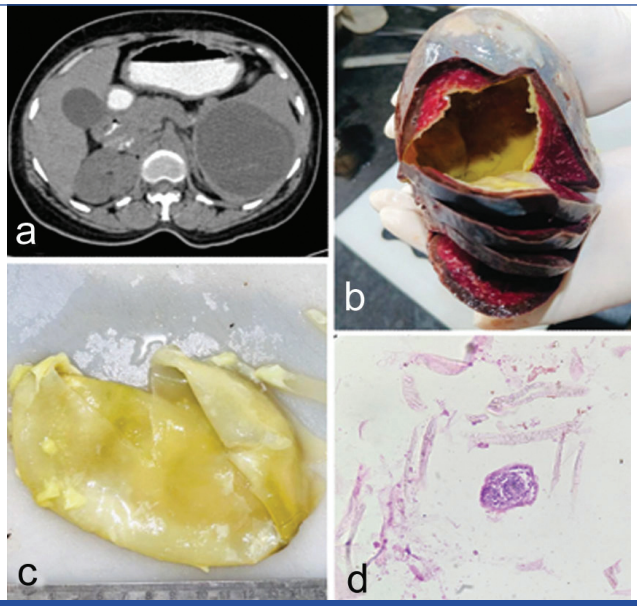
A 40-year-old female presented at the Outpatient Department of Surgery at Sawangi (Meghe) Wardha with complaints of abdominal pain, fever, and swelling in the left upper quadrant for the past two months. The patient was fine two months ago, but then began experiencing pain and tenderness in the left upper quadrant that radiated to her back. During the local abdominal examination, a soft mass was noted that moved with respiration and could be felt in the left hypochondrium, around 8 cm from the left costal border. No stiffness or guarding was observed. All essential standard investigations were conducted, including hepatic function tests, kidney function tests, and a complete blood count. The laboratory findings were within the normal range except for haemoglobin levels. Contrast-enhanced Computed Tomography (CECT) of the abdomen and pelvis was performed [Table/Fig-1a]. The CECT revealed evidence of a well-defined cystic lesion in the lower pole of the spleen measuring approximately 8×6 cm, with no signs of calcification or internal vascularity. The walls of the cyst were regular, approximately 1-2 mm in thickness. The cyst was displacing the left kidney inferiorly, leading to the suspicion of a hydatid cyst of the spleen based on the CECT findings [Table/Fig-1a]. Subsequent to the report, a splenectomy was performed, and the spleen specimen was sent for histopathological diagnosis {Haematoxylin and Eosin (H&E)}. Grossly, the excised spleen specimen measured 11×9×7.5 cm. Upon cutting the spleen, yellowish fluid oozed out, and a large cystic cavity measuring 8×6×5 cm was identified [Table/Fig-1b]. The cyst appeared yellowish-white in colour [Table/Fig-1c]. Microscopic examination at 100X confirmed the diagnosis of a splenic hydatid cyst, displaying the classic laminated cyst wall encircling scolices with a double layer of hooklets. The histopathological features were consistent with an Echinococcus granulosus infection [Table/Fig-1d].



[Table/Fig-1]: a) CECT: Evidence of cystic lesion in the lower pole of spleen; b) Cut-section of spleen; c) The cyst; d) Microscopic examination (H&E,100X), classic cyst wall and scolices with a double layer of hooklets.

The presence of three layers in the cyst excluded the diagnosis of fibro-polycystic liver disease as well as amoebic or pyogenic splenic abscess. H. influenzae along with Pneumococcal vaccination was administered, and laparoscopic splenectomy was performed, resulting in the removal of the spleen. The postsurgery period was uneventful. The patient was monitored at four weeks, three months, and six months without any specific complaints.

The parasite responsible for hydatid cysts is Echinococcus granulosus. Human infections typically occur through the oral-faecal route, where inadvertently ingested eggs from the faeces of dogs or other hosts lead to infection [1]. The prevalence of hydatid cysts is highest in the liver, followed by the lungs. Literature research indicates that reported cases of hydatid cysts in the spleen are infrequent. The global incidence of splenic hydatid cysts is estimated to be approximately 0.5% to 3% [2]. Consequently, the diagnosis of hydatid cysts in the spleen is a rarity in the existing literature.

Hydatid disease, caused by echinococcal cysts, can affect various organs, with the liver being the most commonly affected, followed by the lungs, kidneys, bones, and brain. Although less frequent, other organs such as the heart, spleen, pancreas, and muscles can also be impacted, albeit rarely [3]. A systematic review indicates that echinococcal cysts affect approximately 1.0% to 3.0% of patients, with the majority of cases involving concurrent hepatic hydatidosis [1]. In China, isolated involvement is observed in only 0.2% to 0.7% of patients, suggesting systemic spread of the disease [4]. Among abdominal hydatid disorders, splenic hydatid cysts are an uncommon phenomenon, accounting for just 4% of cases [5].

Symptoms of hydatid cysts vary due to their slow progression, particularly if they remain uninfected or rupture. Patients may remain asymptomatic for years, experiencing non specific symptoms such as abdominal pain, weakness, or weight loss. Additionally, organ involvement can lead to symptoms like cough, nausea, vomiting, bloody stools, and chest pain. Complications arise when cysts become complicated, potentially resulting in more severe symptoms and rupture, which can trigger allergic reactions or even lead to death. Gupta A et al., report that cysts can be seen in the liver (55%-60%), lungs (30%), kidney (2.5%), heart (2.5%), bones (2%), muscles (1%), brain (0.5%), and spleen (1.5%) [6].

Diagnosing hydatid disease can be challenging and is often incidental during evaluations for other conditions. The present case underscores the importance of maintaining a high level of suspicion and clinical acumen in challenging diagnostic scenarios. Timely recognition is paramount due to the risk of anaphylactic reactions, the potential for fatality resulting from misdiagnosis, and the avoidance of unnecessary invasive procedures such as open surgery. The primary course of treatment is surgery, with alternatives based on the surgeon's experience and the particular patient. There have been reports of cyst enucleation, unroofing with omentoplasty, partial and whole splenectomy [7].

Furthermore, the present case highlights the necessity for further research aimed at determining the most effective diagnostic

modalities for patients presenting with isolated splenic echinococcal cysts. Enhanced understanding and improved diagnostic techniques can facilitate early detection and appropriate management, thereby reducing the morbidity and mortality associated with this potentially life-threatening condition.

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