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Case Report

A splenic hydatid cyst in young female: a case report

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ABSTRACT

Splenic hydatid disease is a rare kind of hydatid disease, accounting for less than 8% of cases in humans. Here we present a case of 23 years old female patient came to hospital with chief complaints of pain radiating to left quadrant in the last 2 years and cough with sputum and nausea and admitted in the hospital for further evaluation. CT chest shows cystic mass in the left hypochondrium lateral to the stomach compressing the stomach, later did CT abdomen which clearly indicates the spleen is enlarged in size with well-defined hypodense non enhancing unilocular cystic lesion measuring 13×13×11 cm (CC×AP×TR) in the upper and mid poles.

Keywords: Hydatid cyst, Hypochondrium, Epigastrium, Unilocular cystic lesion, Hypodense

INTRODUCTION

The hydatid disease known as hydatid disease (Echinococcosis) is brought on by the larval *Echinococcus* granuloses tapeworm parasite. The unintentional intermediate host in the hydatid disease growth cycle is humans.[1] Splenic hydatid disease is a rare kind of hydatid disease, accounting for less than 8% of cases in humans. While splenic hydatid cysts (SHD) are sometimes the predominant location (primary form), they typically coexist with hepatic hydatid cysts (secondary form).[2] Reports of splenic hydatidosis date back thousands of years. The first person to report splenic hydatidosis as an autopsy finding was Berlot in 1790.[3] The initial infection typically manifests as no symptoms in childhood, and latent periods can extend beyond a few years. The liver is the organ most affected by this infection, accounting for 70% of cases, followed by the lungs at 25%.[1] SHD are uncommon; they affect less than 2% of abdominal CE cases and 0.5-8% of cases of CE overall.[4]

The initial clinical sign of splenic hydatid disease is typically an unintentionally found abdominal mass, most commonly in the left hypochondrium and less frequently in the epigastrium. Usually, the first clinical indication is pain, a dull dragging aching.[1]

CASE REPORT

A 23 years old female patient came to hospital with chief complaints of pain radiating to left quadrant in the last 2 years and cough with sputum and nausea and admitted in the hospital for further evaluation. on examination patient is conscious and coherent, Bp: 110/70 mmHg, PR: 78/min, RR: 20c/min, SpO_2-98%, CVS: S1S2+, P/A: soft.

Laboratory findings show hemoglobin 11.9 mmHg, PCV: 3.6 (decreased).

CT chest shows cystic mass in the left hypochondrium lateral to the stomach compressing the stomach, later did CT abdomen which clearly indicates the spleen is enlarged in size with well-defined hypodense non enhancing unilocular cystic lesion measuring 13×13×11cm (CC×AP×TR) in the upper and mid poles. The lesion is covered by the thin rim of splenic parenchyma in the

superior and lateral aspects of the lesion with no evidence of wall calcifications, adjacent inflammation. The lesion is causing displacement of the stomach to the opposite side.

Based on the subjective and objective data the patient was diagnosed with benign splenic cyst hydatid cyst.

Surgical procedure

Underwent laparoscopic procedure of deroofing + partial cyst wall excision procedures were done.

Operative findings

Large cyst located at the superior pole of spleen, clean oily fluid of 2 lit. aspirated and surrounding structures normal were operative findings.

Operative procedure

Under general anesthesia, supine position painting and draping done, pneumoperitoneum created by open technique, standard ports inserted, cyst was aspirated completely, partial cyst wall excision done, was with 10% betadine given and aspirated, haemostasis ensured, ports closed, dressing done, drain done.

There was no parasite tissue or calcification in the serologic bloody fluid that was inside the cyst. Because the decision to perform a splenectomy was not finalized before surgery, patient received vaccinations against *Pneumococcal*, and *Haemophilus influenzae*, meningococcal within a week of the procedure. There was a 3-day hospital stay. Following the procedure, the patient's condition remained stable and there were no issues. Both the lab results and the vital signs were normal. For three days, the inserted drain output remained constant. After the pathology report confirmed the diagnosis of splenic hydatid cyst (SHC), the patient was prescribed analgesics to relieve pain and albendazole for six months to prevent SHC from recurring.

Treatment

Treatment included tab augmentin 625 mg BD × 5 days, tab pantoprazole 40 mg OD × 5 days, tab ultracet TID × 3 days, syp lactulose 15 ml BD × 5 days, tab albendazole 400 mg BD × 30 days, tab ondansetron 4 mg SOS and tab Dolo 650 mg SOS.

Diet plan

Soft diet was recommended.

Post operative scanning

CT reports showed a medium sized well defined thin walled non enhancing hypodense cystic lesion measuring approximately 44.0×42.4mm in the upper half of the splenic parenchyma, the lesion shows no obvious solid component / membranes / internal septations.
Treatment included albendazole 400 mg BD × 6 months.

Follow-up up to 6 months there is no growth of the cyst and no calcification is seen, active cyst is noted.

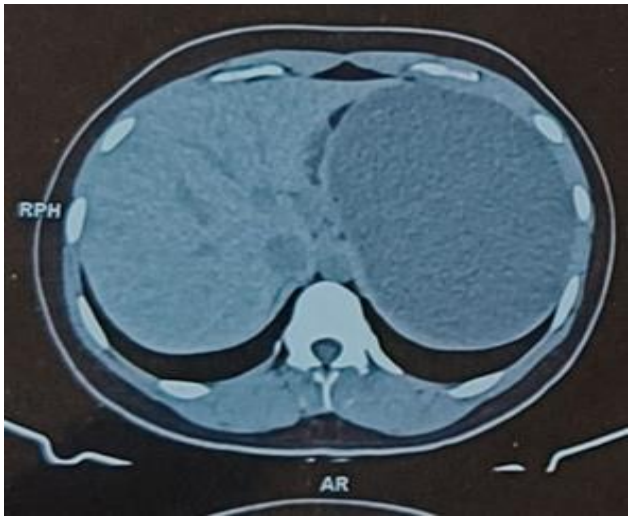

Figure 1: Pre-operative cyst.

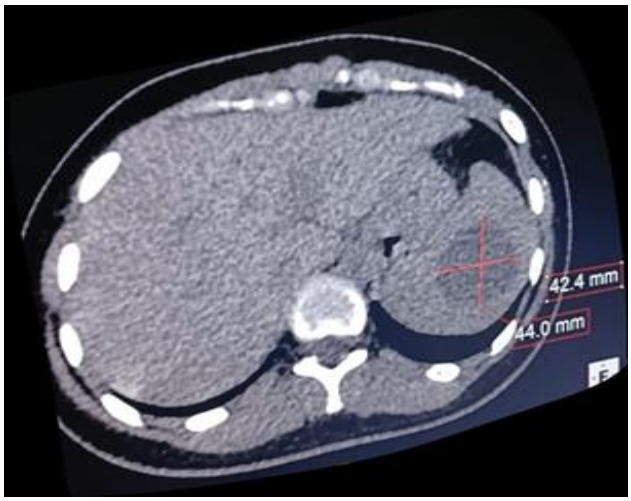

Figure 2: Post-operative cyst.

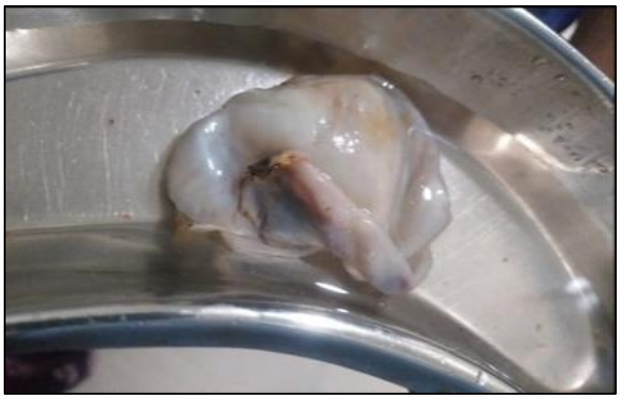

Figure 3: Cystic mass after surgery.

Figure 4: Oily aspirated from the cyst.

DISCUSSION

There aren't many explanations for the splenic parasitic illness. The parasite's eggs have the ability to pass through the liver and lung barriers, enter the bloodstream, and settle in the spleen. Retrograde spread through the splenic vein and portal is also a possibility. Parasites exit the digestive tract, travel through the portal and lienal veins, and then retrogradely enter the spleen parenchyma. Additionally, the intraperitoneal rupture of a hepatic hydatid cyst or the gastric or colonic trans-parietal passage of eggs can cause splenic involvement.[5]

There was only one cyst in our patient, and no other sites were involved. SHD is diagnosed when a patient is evaluated for other illnesses. About 30% of patients with SHD are asymptomatic; however, serological tests imaging methods, and clinical examinations are used to make the diagnosis. SHD often grows at a very slow rate, typically 0.3-1 cm per year. Large cysts can cause patients to experience pain in the left upper quadrant and/or a palpable mass, and may show up with nonspecific symptoms like dyspepsia, constipation, or dyspnea brought on by the left diaphragm pushing up.[6]

There is disagreement over the appropriate technique for treating splenic hydatid disease. While some writers favor conservative surgical methods like cyst enucleation, de-roofing with omentoplasty, partial splenectomy, and others, others favor total splenectomy.[7] In our case deroofing with aspiration of the fluid is done and 4 months after surgery the size of the cyst is 42.4×44.0 mm, thus we can say that there is re-occurrence of the cyst in our case and splenectomy is the only way for complete removal of the cyst.

CONCLUSION

The diagnosis of SHD presents challenges due to its rarity, often leading to incidental discovery through imaging modalities such as CT scans. In cases where conservative measures such as laparoscopic partial cyst wall excision and albendazole therapy fail to induce calcification, especially in cysts larger than 10 cm, splenectomy emerges as the primary treatment option. This surgical intervention becomes imperative to mitigate the risk of complications associated with large, persistent cysts that remain unresponsive to alternative therapies. Nonetheless, each treatment decision should be carefully evaluated in consideration of the individual patient's condition, balancing the potential benefits of splenectomy against its inherent risks and long-term implications for the patient's health and immune function.

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