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Case report

Liver Cysts! A Diagnostic Dilemma

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Abstract

Introduction: Cystic lesions within the liver are reported to occur in up to 5% of the population. Most of them are common and benign, but the possibility of a rarer cystic liver lesion should not be overlooked. They can present with general or specific symptoms. Most are found incidentally on imaging studies. None of the haematological and biochemical parameters were suggestive of liver cyst. We report this case because of its unusual presentation and associated findings.

Case scenario: A 66 years old lady presented to general surgery OPD with complaints of mass per abdomen for 3-4 months and pain in abdomen for 2 months.

On Examination: A 10X10cm bulge was visible in hypogastric, left hypochondriac and umbilical region. Lump was moving with respiration and was reducing in size on leg raising test. Cystic in consistency, swelling was moving in horizontal direction and dull on percussion.

Investigations: CBC, LFT, KFTS, Serum amylase and lipase, chest and abdominal X-ray showed no major abnormality. Upper GI scopy showed bulging posterior wall of stomach suggestive of lump arising behind the stomach. Ultrasound of abdomen was suggestive of two cystic lesions possibly a simple biliary cyst and a pseudocyst of pancreas.

Management: Patient underwent exploratory laparotomy with marsupialization and drain placement in both the cysts with left hepatic lobe contained hemorrhagic fluid and the right hepatic lobe contained straw colored fluid.

Conclusion: Cystic liver lesions require accurate pre-treatment diagnosis in order to select the appropriate therapy for each patient, as they can represent benign or malignant formations.

Keywords: hepatic cyst, pain in abdomen, Diagnostic Dilemma, cystadenoma, cystadenocarcinoma

Introduction

Aetiology and clinical presentation of space occupying lesions (SOL) of liver are varied. It can be solid, cystic or heterogenous. [1] Cystic lesions within the liver are reported to occur in up to 5% of the population [2]. Most of them are common and benign, but the possibility of a rarer cystic liver lesion, such as hepatobiliary cystadenoma (HC) or hepatobiliary cystadenocarcinoma (HCa), should not be overlooked. They can present with general or specific symptoms depending of the nature of the lesion [3]. In fact, most are found incidentally on imaging studies and tend to have a benign course, but a minority may cause symptoms, and rarely may be associated with serious morbidity and mortality.[4] None of the haematological and biochemical parameters were suggestive of liver cyst. It was an intra-operative surprise to find such a large 2 liver cysts, which was drained. We report this case because of its unusual presentation and associated findings.[1]

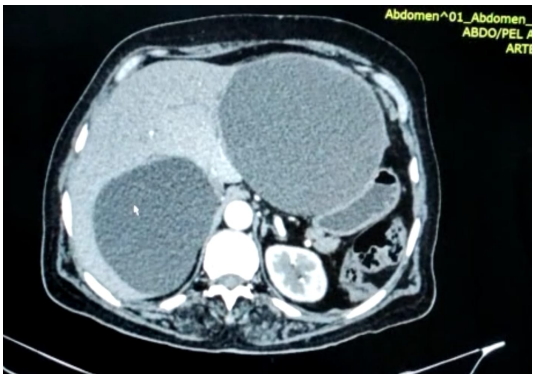
Case Scenario:

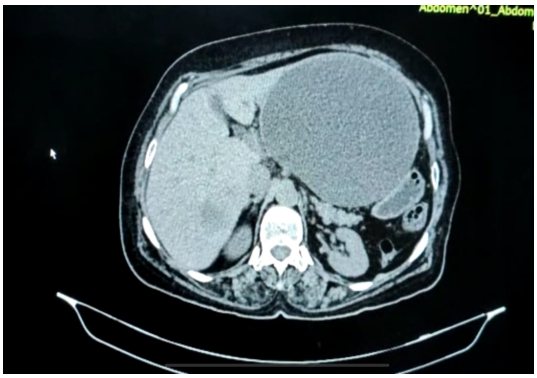
Clinical Presentation: A 66 years old lady presented to general surgery OPD with complaints of mass per abdomen for 3-4 months and pain in abdomen for 2 months. Patient had no history of trauma, vomiting or early satiety, any previous episodes of acute abdomen. She was known case of hypertension for 6 years on regular medications. Attained menopause 25 years back and underwent tubectomy 35yrs back.

Examination findings: A 10X10cm bulge was visible in hypogastric, left hypochondriac and umbilical region. Skin over the swelling has no secondary changes. Lump was moving with respiration and was reducing in size on leg raising test. It was an intra-abdominal lump. Cystic in consistency, swelling was moving in horizontal direction and had no mobility in vertical direction, dull on percussion. No left supraclavicular lymphadenopathy. The per rectal and per vaginal examinations were within normal limits.

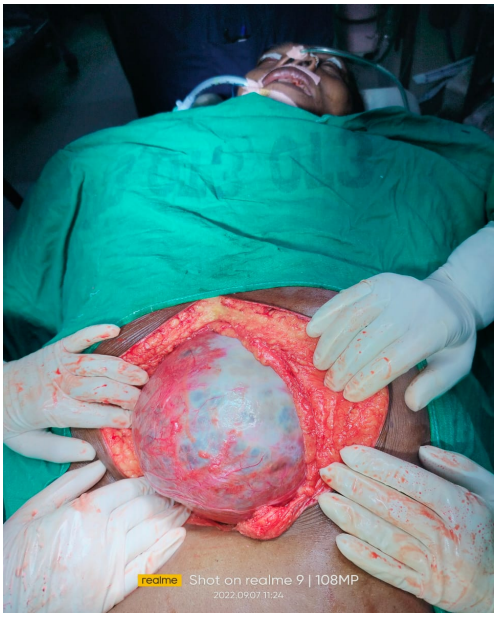
Investigations:

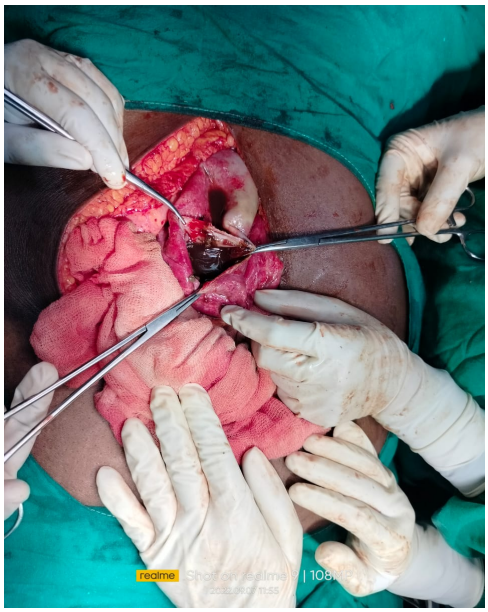
- CBC, LFT, KFTS, Serum amylase and lipase were within normal limits
- Chest and abdominal X-ray showed no major abnormality
- Upper GI scopy showed bulging posterior wall of stomach suggestive of lump arising behind the stomach, abutting the wall
- Ultrasound of abdomen was suggestive of two cystic lesions possibly a simple biliary cyst and a pseudocyst of pancreas.
- Contrast enhanced computed tomography of abdomen showed the following findings:
- Non enhancing thin-walled cystic lesion in segment VI and VII of liver features suggestive of simple biliary cyst.
- Another non enhancing thin-walled cystic lesion in gastro hepatic region with mixed density of size 10.8* 9.4* 8cm likely suggestive of pseudocyst of pancreas.





Intra operative findings:





Management:

Patient underwent exploratory laparotomy with marsupialization and drain placement in both the cysts. Intra operative findings: The cyst present in left hepatic lobe contained hemorrhagic fluid and the one present in right hepatic lobe contained straw colored fluid. Patient had uneventful post operative recovery and was discharged on post operative day 10. Drains were removed on the day of discharge when draining was nil/ day. Though rare but liver cysts can be diagnosed by thorough clinical examination and radiological investigations. Can be managed by simple drainage procedures in case of smaller dimensions and needs such definitive procedures like marsupialization if larger in size.

Histopathology Examination report:

Gross Examination: Received multiple, friable, brownish, soft tissue pieces collective ly of size 6.5 x 5 x 2cm. **Microscopic examination:** Sections show blood clot and necrotic tissue along with inflammatory infiltrates of lymphocytes, plasma cells and histiocytes. **Impression:** Benign cystic lesion with inflammation and hemorrhage with adherent adjacent liver tissue. No definitive evidence of hydatid cyst.

Discussion

Liver cystic lesions consist of a heterogeneous group of disorders. Rare liver cystic lesions such as cystadenoma, hydatid cyst, polycystic liver disease, Caroli disease, and cystic liver metastases pose several dilemmas to the practicing surgeon or physician. It is very important that awareness and a high index of suspicion for rare diseases and HC are present, so as to provide as accurate a diagnosis as possible. Since our diagnostic tools have become more powerful and accurate, our adequate knowledge of the nature, evolution, confirmation, and treatment of all the possible pathological entities in the differential diagnosis becomes more necessary than ever. The use of Contrast-enhanced ultrasound (CEUS) in diagnoses of liver lesions has shown promising results, providing more accurate images than conventional ultrasound. [4]

The cysts in polycystic liver disease (PLD) can increase in size and number during pregnancy or simultaneously with the use of exogenous female steroid hormones [5]. Most patients are asymptomatic while some patients develop massive hepatic cystic disease and become clinically symptomatic, which is associated with increased liver volume and adjacent

visceral compression. Usually, patients suffer from chronic dull abdominal pain, satiety, weight loss, dyspnea, physical disability, and descensus. Liver function tests are usually normal except for mild elevation in ALP or γ-GT. Even with marked hepatosplenomegaly and portal hypertension, liver function is well preserved in PLD. Diagnosis is confirmed with USG and CT imaging, which along with MRI provides the surgeon with valuable preoperative information, such as the location of infected or hemorrhagic cysts that may be responsible for symptoms. [6] Treatment should be considered in cases of persistent symptoms or associated complications. Cyst aspiration with sclerosis, open or laparoscopic cyst fenestration, combined hepatic resection and fenestration, liver transplantation, and recent medical treatment with somatostatin analogues, are possible therapeutic options based on the type of PLD [7,8].

The first important step, regarding liver cystic lesions, is to make a definitive diagnosis of the nature of the cystic lesion. The second is determining whether the patient's symptoms are related to the cystic lesion. The third is deciding whether and when to initiate therapy for the lesion. Finally, a number of treatment options are available, leading to the fourth issue, which is deciding the appropriate therapy for the patient. [4]

Out of which 10-15% of patients present to a hospital with clinical signs and symptoms. It is found to be slightly more common in women with a ratio of 1.5:1 (female: male). Large simple liver cysts present with abdominal mass, right upper quadrant pain due to stretching of hepatic capsule and compression of adjacent structures. [9,10] When the size of the cyst is large it is preferred to be drained surgically so that infection can be prevented. Symptomatic cysts of liver, even of size 15-25cm can be treated by laparoscopic management. Laparoscopic de-roofing is quite effective with simple puncture. Laparotomy must be replaced by minimal access surgery like laparoscopy as it has reduced morbidity and fewer complications associated with an abdominal incision. [11,12]

Conclusion

Cystic liver lesions require accurate pre-treatment diagnosis in order to select the appropriate therapy for each patient, as they can represent benign or malignant formations. It is best that a specialized team deals with cystic liver lesions so that diagnosis and treatment are accurate

and focused. Specifically, rare entities require accurate diagnosis and management, as they can pose a malignant impact.

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