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Case Report

Surgery Section

A Rare SOL of the Liver: Diagnostic and Management Dilemma

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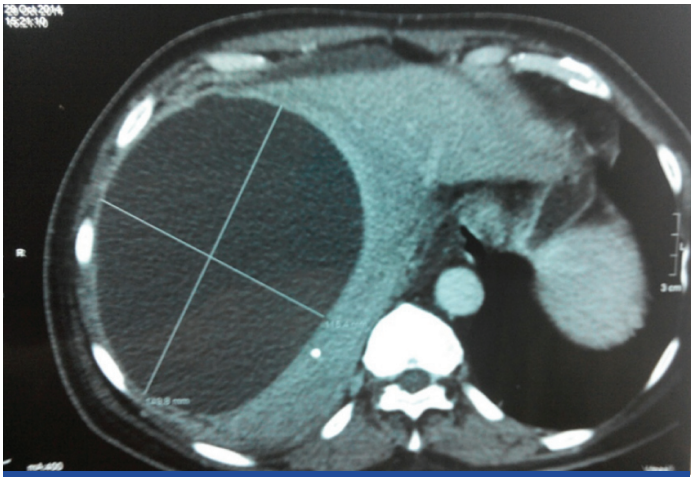
ABSTRACT

Aetiology and clinical presentation of space occupying lesions (SOL) of liver are varied. It can be solid, cystic or heterogenous. Usually liver abscess presents as a symptomatic cystic SOL in a sick patient. Here, we are reporting a case of giant liver abscess presenting as simple benign cyst with corroborative image findings of simple cyst. He had significant co-morbid illness and jaundice on clinical evaluation. Liver abscess was not a differential diagnosis from clinical history. None of the haematological and biochemical parameters were suggestive of liver abscess. It was an intra-operative surprise to find such a huge liver abscess with 2 liters of pus, which was drained. We report this case because of its unusual presentation and associated findings.

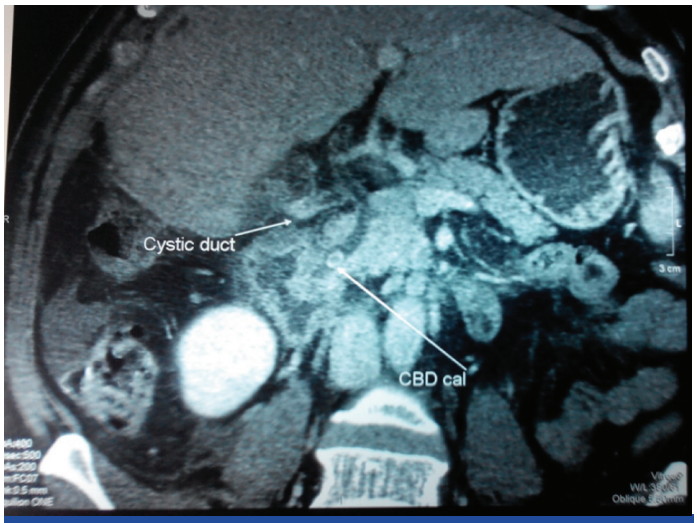
Keywords: Cholelithiasis, Liver abscess, Simple cyst of liver

CASE REPORT

A 55-year-old male, type 2 diabetic and hypertensive came to the Department of Surgical Gastroenterology, Apollo hospital, Chennai, India with dull aching upper abdominal pain since 6 months, associated with post prandial fullness. He also had reduced appetite, bilateral pedal oedema for last 15 days. There was no history of vomiting, fever, constipation, melena or weight loss. On examination, he was icteric with hepatomegaly. On investigation, he had mild anaemia (haemoglobin 8.7 gm%) with normal leukocyte and platelet count. Liver function test revealed hyperbilirubinemia (6.2mg/dl), hypoalbuminemia (2.8gm/dl), elevated alkaline phosphatase (349U/L) and gama glutamyl transpeptidase (293U/L). ALT and AST were normal with raised prothrombin time (INR 1.83). Viral markers were negative. Renal function test was normal except mild hyponatremia. Ultrasonography showed cholelithiasis, well defined large cyst in right lobe of liver with a differential diagnosis of Hydatid cyst or simple cyst. He underwent contrast enhanced CT scan which revealed large (16X17cm) unilocular simple cyst in the right lobe of liver compressing middle and right hepatic vein [Table/Fig-1]. No dilated intra or extra hepatic biliary radicle; distended gall bladder with calculi, thickened fundus; single stone in non dilated distal CBD [Table/Fig-2]. Few specks of calcification were noted in both lobes of liver. With a diagnosis of simple cyst



[Table/Fig-1]: Giant cystic SOL right lobe liver



[Table/Fig-2]: Cholelithiasis and choledocholithiasis

of liver with cholelithiasis and choledocholithiasis, he was planned to undergo endoscopic retrograde cholangiography with common bile duct clearance followed by laparoscopic surgery. During the course of investigations, he was found to have complete heart block for which permanent pacemaker was placed. Endoscopic retrograde cholangiography could not succeed because of severe extrinsic compression on 1st and 2nd part of duodenum. Echinococcus serology was negative. So, with a preoperative diagnosis of simple cyst of liver, laparoscopic de-roofing of the cyst and cholecystectomy was planned, to be followed by endoscopic cholangiography. On laparoscopy dense omental adhesion to right lobe of liver and inflamed gall bladder were found. After adhesiolysis, on aspirating/opening the cyst, large volume (2 litres) of pus drained. Cholecystectomy was done with drain placement to abscess cavity and sub hepatic space. Postoperatively, he needed ICU admission for one day with inotropic support. Later he improved and discharged on 5th postoperative day. Drains were removed on the day of discharge draining less than 50ml/day. ERC was done on 8th day and stones extracted from CBD. Pus culture report came as pan-sensitive *Klebsiella* and antibiotics were advised for 2 weeks. Follow up ultrasound after 4 weeks revealed resolving residual cavity.

DISCUSSION

Hepatic cysts are usually incidental findings during health check up or investigation for some other disease. Though most are asymptomatic, 15% patients may experience abdominal pain and distension [1]. This is more common in older patients with increasing size of the cyst. Our patient was 55-year-old male with similar features. CT scan of simple hepatic cyst shows non enhancing homogeneous lesions with smooth imperceptible wall. The sensitivity and specificity are more than 90%, particularly for larger cysts [2]. Sometimes it may confuse with type 1 Hydatid cyst or biliary cyst adenoma. But, rarely does it produce a diagnostic dilemma as liver abscess. The history and CT findings in our case were favouring simple cyst of liver. Pyogenic liver abscesses (PLA) are rare now days. Fever is the most common presentation, which is seen in 67% to 99% of patients [3,4]. This was absent in our case. Most of the patients will present with elevated white cell count which is seen in 84% to 88% of patients [3,4]. Total leukocyte count was normal (8400/cmm) in our case. CT sensitivity is 93% to 100% to detect PLA, particularly for macro abscesses (>2cm size). MRI does not have any advantage over CT in detecting PLA. Here, with clinical picture and laboratory findings unfavourable for liver abscess, CT scan also failed to detect it and featured it like a simple hepatic cyst [Table/Fig-1]. Large pyogenic liver abscess patients are usually sick with high grade fever which was not seen in our case. Henegan H M, et al., mentioned gall stones (45%) as the commonest etiology for pyogenic liver abscess which may be in our case also [5] [Table/Fig-2]. Very few PLA are more than 15cm in size and the largest size of abscess in the above series was 12 cm. Dhaval O, et al., published a case series of 400 PLA cases from India where the commonest organism was *Klebsiella* (45%) which is the same as ours [6]. Similar pattern was seen by Pastagia M et al.,[7]. Antibiotics play a major role in the management of it but it alone should not be the only modality of therapeutic management in liver abscesses of more than 5cm size [8,9]. Percutaneous aspiration is done for cases which are unresponsive to 48 to 72 hours antibiotics. Traditionally, open surgical drainage is done for large liver abscess which do not respond to aspiration. Laparoscopic drainage is an alternative to open surgical drainage with all the advantages of open drainage with less invasiveness and minimal surgical stress to the patient [8-10]. Laparoscopic surgery for simultaneous treatment of PLA and biliary pathology is feasible and the results are comparable to open surgeries [11]. We did laparoscopic abscess drainage and cholecystectomy simultaneously in our case which could avoid another future surgery for the patient. From this case scenario, we suggest to keep pyogenic liver abscess as a differential diagnosis in a cystic lesion of liver with gall stone disease.

CONCLUSION

There are typical descriptions of clinical history, biochemical and radiological findings for liver abscess. But, on rare occasion like our case it can present with very unusual findings mimicking giant simple cyst or hydatid cyst leading to intraoperative surprise. Possibility of this condition should be kept in mind when there is slightest doubt on clinical or image finding.

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