ORIGINAL RESEARCH PAPER

General Surgery

KEY WORDS: Laparotomy, giant hepatic cyst, drainage, excision of cyst wall

A RARE CASE OF GIANT LIVER CYST

Dr. M. Sivan	Institute Of General Surgery, Madras Medical College And Rajiv Gandhi Government General, Hospital, Chennai, Tamilnadu, India.
Dr. S. Prabhakaran*	Institute Of General Surgery, Madras Medical College And Rajiv Gandhi Government General, Hospital, Chennai, Tamilnadu, India. *Corresponding Author
Prof. P. Thangamani	Institute Of General Surgery, Madras Medical College And Rajiv Gandhi Government General, Hospital, Chennai, Tamilnadu, India.
Prof. R. Kannan	Institute Of General Surgery, Madras Medical College And Rajiv Gandhi Government General, Hospital, Chennai, Tamilnadu, India.

ABSTRACT

Case report: A 58-year-old lady with a two yeas history of an enlarging abdominal mass with early satiety. Surgery revealed a giant simple hepatic cyst arising from all segments of liver that drained 4.0 litres of serous fluid.Simple hepatic cyst can attain giant dimensions and should be considered in the differential diagnosis of intra-abdominal masses.

INTRODUCTION

The term hepatic cyst usually refers to solitary non-parasitic cysts of the liver also known as simple cysts[1,2]. Giant cysts of the liver are uncommon[3].The cause of simple liver cysts is not known, but they are believed to be congenital in origin[1]. Simple hepatic cysts rarely cause symptoms, however they become symptomatic due to mass effect, rupture, haemorrhage, and infection. Large cysts can produce atrophy of the adjacent hepatic tissue while huge cysts can cause complete atrophy of a hepatic lobe with compensatory hypertrophy of the other side[4]. The optimal management of non-parasitic hepatic cyst is a topic of debate[5]. Management options include percutaneous aspiration, injection of sclerosing agents, laparoscopic or open fenestration, and surgical cystectomy[6].

Case history

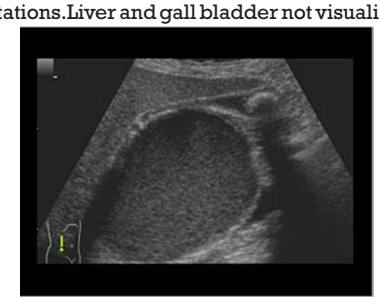
A 70 -year-old female presented with a progressively increasing abdominal mass of **2years** duration, Gradual onset ,Progressive in nature, H/O abdominal pain on and off intermittent, dragging type of pain, H/O breathlessness+, No H/O fever /vomiting/ jaundice. H/O loss of weight present. Patient was admitted and treated in private hospital one year back and evaluated CECT taken which showed **21*18*18cm of cystic lesion noted in the right lobe of liver causing extraneous compression over adjacent structures And intra hepatic portion of IVC**. Patient lost follow up there and now presented with progressive complaints. There was no history of jaundice, breathlessness, hametemesis, malena ,pedal edema.

Examination revealed the patient in good nutritional status. She was not anaemic not icteric. Her vital signs were within normal limits. The abdomen was protuberant with huge fullness in the right upper quadrant measuring 20cm x 14cm and extending below the umbilicus, dilated veins presented over the swelling. On palpation a ovoid shaped swelling of size 20*14 cm ill defined margin, smooth surface, cystic in consistency, non tender, moves with respiration, upper extent couldn't made out. The mass had very intrinsic limited horizontal mobility and was intra-abdominal in location. Liver was not individually palpated. Percussion notes were dull over the mass and bowel sounds were present. No abnormality detected in Digital rectal examination

Laboratory investigations: Haemogram showed a haemoglobin of 12.1g/dl, white blood cells (WBC) 6.5x103/ul (neutrophils 81%, eosinophils 6%, lymphocytes 13%), and platelets 298x103/ul. Urea and electrolytes are within normal limits. liver function tests found to be normal. She was hepatitis B virus (HBV) and hepatitis C virus (HCV) negative.

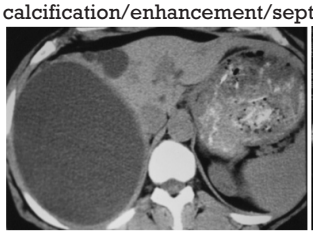
Radiology showed a normal chest X-ray,

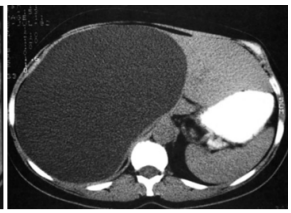
Abdominal ultrasonography reported Well defined anechoic cystic lesion of size 15.5*20cm noted in Right hypochondrium and epigastric and right lumbar region without septations.Liver and gall bladder not visualized.



IMP: liver cyst/pseudocyst pancreas.

CECT ABDOMEN taken which showed Hepatomegaly with large hypodense cystic lesion in right lobe of liver sized 20*15cm involving all segments of liver. No e/o wall calcification/enhancement/septations.





IMP: large cyst arising from the Right lobe of liver.Then we provisionally diagnosed as liver cyst and taken for surgery electively.

PROVISIONAL DIAGNOSIS: SIMPLE LIVER CYST
Patient was posted elective laparotomy and proceed

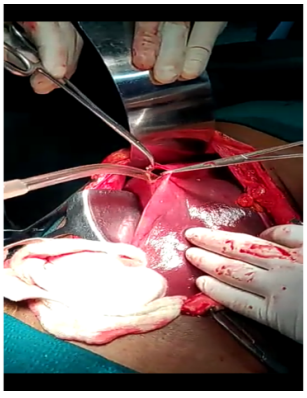
INTRA OPERATIVE FINDINGS:

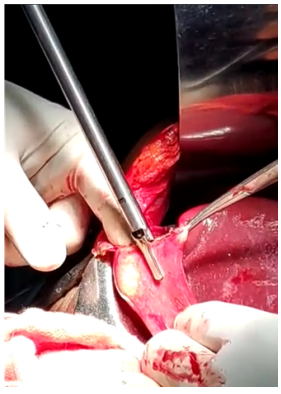
Under ETGA patient in supine position ,by midline incision abdomen opened in layers and peritoneal cavity entered. A size of 20*15CM cystic lesion found in right lobe of liver bluish hue seen over the cyst wall. Gall bladder seems to be normal and pushed posteriorly. Other solid organs and bowel found to be normal.

PROCEDURE:

CYSTIC FLUID ASPIRATION AND EXCISION

About 4 litres of clear fluid aspirated, and fluid sent for analysis.Ant cyst wall opened and deroofing done. Posterior cyst wall found adherent to liver parenchyma.Anterior cyst wall excised leaving post wall intact.HPE showed fibrocollageneous cyst wall lined by single layer of flattened epithelium along with congested vessels and calcification with surrounding bile ductular proliferation and reported as simple hepatic cyst.The postoperative period was uneventful, oral feeding commenced on the 2nd day post operation; sutures were removed on the 7th day after surgery and patient discharged for outpatient review after 10 days. Postoperative visits on the 4th, 8th, and 12th weeks revealed no abnormality.





DISCUSSION

The hepatic cyst contained about 4.6 litres of serous fluid, Simple hepatic cysts are cystic formations containing clear fluid that do not communicate with the intrahepatic biliary tree.., The cyst is lined by uniform cuboidal or columnar epithelium resembling bile duct epithelium and perhaps resulted from progressive dilatation of biliary michroharmartomas that failed to develop normal connection with the biliary tree[1]. The contained fluid mimics plasma as depicted by the analysis of the aspirate of our patient and is continually secreted by the epithelium lining the cyst which may explain why needle aspirations are not curative[11].

The location of the cyst and its size determine the symptoms. Generally, the hepatic cyst causes no symptoms and may be found incidentally at laparotomy or with abdominal imaging. However, large cysts may present as abdominal lump, palpable mass, right upper quadrant pain (from stretching of hepatic capsule). Compression of adjacent structures may result in the following clinical features: compression of the inferior vena cava resulting in lower extremity oedema, portal vein resulting in portal hypertension, and biliary tree resulting in jaundice[3,12]. Complications of the cyst may also result in acute abdomen from rupture, torsion and the cyst may become infected[2,3,12].

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A definitive role for open surgery technique in selected patients is indicated especially in giant cysts that had taken up most of the abdomen, and displaced other organs. This is to prevent injury to adjacent organs when obtaining access to the abdomen during laparoscopy, more so in a facility without CT and MRI[16].. Gall et al and Tocchi et al reported that laparoscopic approach did not offer better results compared with immediate and long-term results of open deroofing[13,15].

CONCLUSION:

In the present study, an elderly female patient presented with abdominal mass associated with pain. CT scan revealed a large hypodension lesion in the right lobe of liver, supported by histological findings. Surgery revealed a giant simple hepatic cyst with 4.5 liters of fluid. Even though most of the hepatic cysts are benign, better to undergo investigations such as CT, Histopathology examination to rule out differential diagnosis and to alleviate any further complications. **This case is presented for its rarity and unusual size and surgical managment with favourable outcome.**