ORIGINAL RESEARCH ARTICLE

Giant Hepatic CYST Mimicking Pseudopancreatic Cyst: A Case Report

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ABSTRACT

The cause of simple liver cysts is not known, but they are believed to be congenital in origin. Simple hepatic cysts are generally asymptomatic, however they may cause symptoms due to mass effect, rupture, haemorrhage and infection. The cause of simple liver cysts is not known, but they are believed to be congenital in origin. Simple hepatic cysts are generally asymptomatic, however they may cause symptoms due to mass effect, rupture, haemorrhage and infection. The cause of simple liver cysts is not known, but they are believed to be congenital in origin. Simple hepatic cysts are generally asymptomatic, however they may cause symptoms due to mass effect, rupture, haemorrhage and infection.

Keywords: Rupture, Haemorrhage , Infection

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 are generally asymptomatic, however they may cause symptoms 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].Management options include percutaneous aspiration, injection of sclerosing agents, laparoscopic or open fenestration, and surgical cystectomy[6].

CASE REPORT

A 28 year old female presented with pain in abdomen, moderate in intensity, continuous, radiating to the back, aggravated on walking and doing other activities and partially relieved on medication or on leaning forward, had been recurrent in past 3 months. Patient was also complaining of a lump in the left side of upper abdomen for 15-20 days which was noticed when she went to the hospital for treatment of pain. There was no history of yellowish discoloration of the eyes, breathlessness, vomiting of blood, passage of blood in stool, and swelling of the lower extremities.

Examination showed a lady in good nutritional status. She was neither pale nor icteric. Her vital signs were within normal limits. The abdomen was asymmetrically enlarged more in the epigastric and left hypochondrium region with a palpable mass lesion measuring 17cm x 12cm and extending above the umbilicus. The mass had no mobility and was intra-abdominal in location. Palpation of the liver and balloting of the right kidney was limited by the mass. The left kidney and spleen were palpably normal. Percussion notes were dull over the mass and bowel sounds were normally heard. Digital rectal examination was unremarkable.

Haemogram showed a haemoglobin of 9.5g/dl, white blood cells (WBC) 7.1x10^3 mill/cumm. (neutrophils 60%, eosinophils 02%, lymphocytes 35%), and platelets 3.7lac/cumm. Urea and electrolytes, liver function tests (Total bilirubin – 0.4mg/dl, conjugated bilirubin– 0.11mg/dl, AST – 20U/l, ALT – 33U/l, ALP– 78U/l) were normal. She was hepatitis B virus (HBV) and hepatitis C virus (HCV) negative. CEA- 0.7ng/ml, Enzyme estimation- lipase-105U/L, amylase- 45U/L, Radiology showed a normal chest X-ray, abdominal ultrasonography reported an large cystic lesion with internal echoes and septations seen originating from body of pancreas. S/o-? Pseudopancreatic cyst, GB calculi. The liver was reported as normal.

CECT abdomen- E/O well defined large round to oval cystic lesion of size 20*15*13cm (ap*tr*ap) seen in epigastric region causing mass effect on surrounding structure. The site of the origin is difficult to evaluate due to giant nature of cyst. As close relation of cyst is with left hepatic lobe there is possibility of hepatic cyst more likely than pancreatic pseudocyst.

A preoperative diagnosis of an intra-abdominal hepatic cyst was made.

Patient was taken for an elective exploratory laparotomy. Intra operatively a large cyst approximately 20cm x15cm x 8cm was found arising from the inferior surface of the left lobe of the liver. The cyst was in contact with the stomach, spleen and the left dome of the diaphragm.1500ml of straw coloured serous fluid was drained. After debulking of the cyst, distal part of the left lobe of the liver containing the

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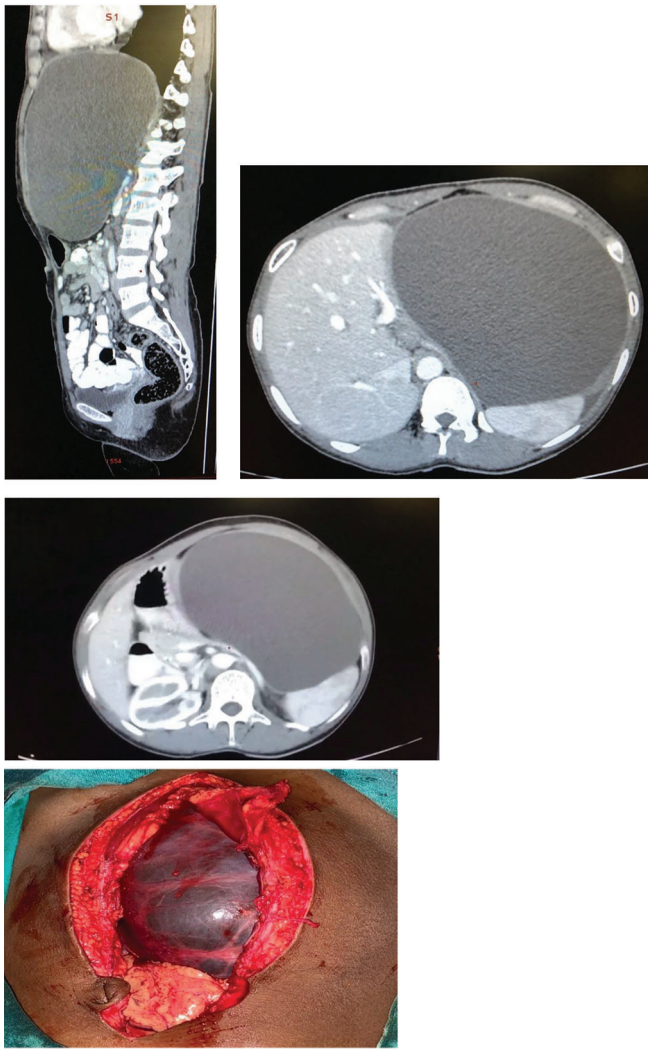

Figure-1a: Large cyst seen after laparotomy

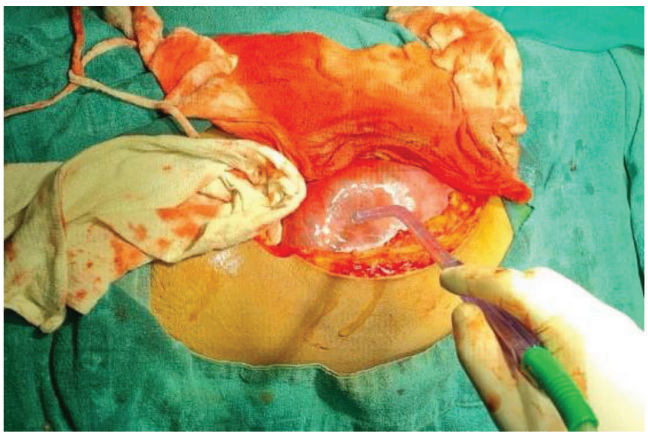

Figure-1b: Straw coloured cystic fluid drained

cyst wall was dissected. Hemostasis assured before closure. Histopathology was suggestive of congestive hepatopathy. Patient was discharged on post-operative day 10 uneventfully and advised for regular follow up.

DISCUSSION

The incidence of hepatic cysts is not precisely known as most are asymptomatic but the documented ones are said

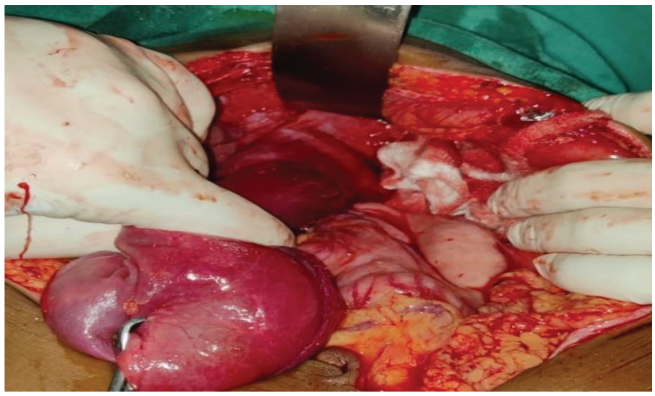

Figure-1c: Cyst wall adhered to left dome of diaphragm

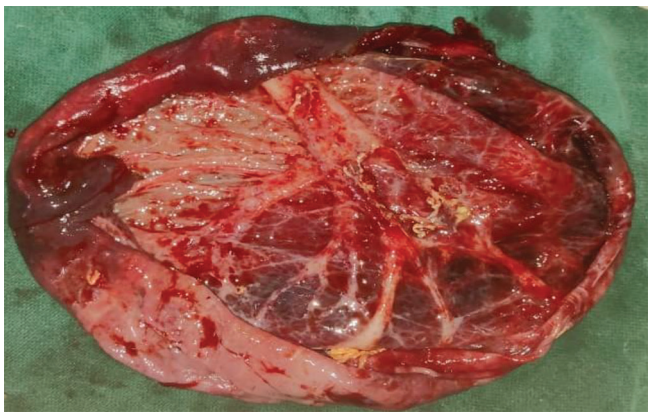

Figure-1d: Excised cyst with in-total removal of left hepatic lobe

to have occurred in 5% of the population. At the most only around 10-15% of the population seek opinion for the cyst because of its unsightly appearance .Ozbalci et al reported the prevalence of hepatic cyst as 0.1-0.5% based on autopsy studies and 2.5% based on ultrasonography [3].

The prevalence of simple cysts has been noted more in women. The female:male (F: M) ratio is approximately 1.5:1 among those with asymptomatic simple cysts while it is 9:1 in those with symptomatic or complicated simple cyst. In another report, Cowles and Mulholland reported F: M ratio of 3:1 for asymptomatic patients and when symptomatic a F: M ratio of 10:1[7].

Simple hepatic cysts are said to have a congenital origin. At 3 weeks intrauterine life, an anterior foregut diverticulum appears and forms the fetal liver and the extra hepatic biliary tract. The primitive hepatocyte sheets get filled with bile ductuli cells at 6 weeks. The epithelial cells surround the primitive portal tract in double layer fashion in the coming 7 weeks. The ductal plate thus formed further forms the primitive bile ducts after 13 weeks. These additional tubules that are formed fail to communicate with the main biliary tree hence lead to formation of liver cysts. The epithelial cells lining the ducts continuously secrete fluid which accumulate and form dilated tubules that finally form the cyst.

Chromosome 16 could be responsible for simple non-parasitic hepatic cysts as indicated by recent studies. The development has a possible etiological connection to the presence of estrogen and due to their increase among women

especially between 40-60 year of age [3,9]

The main investigations performed are ultrasound, abdominal CT and sometimes an MRI. Our case is uncommon in that the hepatic nature of the cyst was not obvious on ultrasound and CT and therefore, other abdominal cysts such as mesenteric cyst and pseudo pancreatic cyst were on the differential. Recent studies have reported elevated serum or cystic fluid levels of CA 19-9, but their clinical implication remains debatable.

Simple hepatic cysts do not communicate with the intrahepatic biliary tree. The size ranges from a few millimeters to massive lesions occupying large volumes of the upper abdomen, the largest reported cyst contained 17 litres of fluid[10].The contained fluid continually secreted by the epithelium lining the cyst which explains why needle aspirations are not curative[11].

Biliary cystic neoplasms are characteristically seen in middle-age group patients and are differentiated from a simple hepatic cyst by the presence of septation, multiloculation and irregularity of the wall on ultrasound and CT. Contrast-induced enhancement of the wall and septa can be seen. Additionally, unlike hepatic cysts ,these lesions can be associated with upstream bile duct dilation and arterial phase high attenuation of perilesional hepatic tissue.[19] Serum or cyst fluid CA 19–9 levels may be raised but is a non specific feature. The differentiation of biliary cystadenoma from biliary cystadenocarcinoma can be difficult. The presence of coarse calcifications, mural nodules and luminal papillary projections are associated with biliary cystadenocarcinoma.

The aim of surgical treatment is to get rid of as much of the cyst wall as possible and to avoid recurrence. Active treatment of simple hepatic cyst is needed only in symptomatic cases. Aspiration only as a treatment modality is not an effective intervention: in a study of 15 sole aspiration procedures on 13 patients, there was a 100% recurrence rate to their original size. [17] However, aspiration along with sclerotherapy agents such as alcohol or minocycline hydrochloride is more effective; a review of 91 cases of simple cysts treated with alcohol sclerotherapy (involving multiple investigators) recorded recurrence in only three cases[18]. However, in many cases treatment resulted in only partial volume reduction of cysts.

Sclerotherapy techniques have not yet gained acceptance and the management of choice of a simple hepatic cyst is considered to be surgical. The surgical options include laparoscopic deroofing of the cyst, open deroofing of the cyst and open resection. In deroofing procedures, the residual cyst lining can drain into the peritoneal cavity and hence is not a cause for concern.

In recent years, many conventional open surgical procedures have been replaced by minimally invasive surgery[3]. Non-surgical methods, simple percutaneous aspiration alone is not adequate as it is linked with infection and recurrence. Follow up results were better when percutaneous aspiration was done along with sclerosis. Marcho Perez et al reported successful treatment with aspiration and injection of phenol alcohol[14]. This procedure may lead to irreversible sclerosing cholangitis in the presence of undetected communication with the biliary tree[15]. Symptomatic nonparasitic cysts, even cysts of the liver (15-25cm) have been treated by laparoscopic management[3].

Open surgery technique is indicated especially in giant cysts that occupy most of the abdomen, and displace 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]. Postoperative morbidity and lengths of postoperative hospital stay associated with laparotomy and have been stated as limitations of open surgery. Laparoscopic management has treated symptomatic nonparasitic cysts, even cysts of the liver (15-25cm)[3].

CONCLUSION

The prognosis in our patient is expected to be good in view of the segment of the liver involved as this facilitated wide excision and the frequency of recurrence in this patient is expected to be low because of the same reason when compared with cyst in the difficult posterior location. Intra-abdominal masses present diagnostic and therapeutic challenges especially in areas with limited radiographic imaging facilities. Giant simple hepatic cyst should be considered in the differential diagnosis of intra-abdominal masses.

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