IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 19, Issue 10 Ser.2 (October. 2020), PP 53-56
www.iosrjournals.org

Simple Hepatic Cyst: A Case Report

Dr. Murugadasan P[1], Dr. Kalaranjani V[2]
([1]Assistant Professor,[2] Post Graduate, Department of General Surgery, Coimbatore medical college hospital, Coimbatore, Tamilnadu, India)
**Corresponding Author: Dr. Kalaranjani*

Abstract:
The term hepatic cyst usually refers to solitary non-parasitic cysts of the liver also known as simple cysts.The most common benign lesion found in the liver is the congenital or simple cyst. They are believed to be congenital in origin. Asymptomatic simple cysts are best managed conservatively. The preferred treatment for symptomatic cysts is ultrasound or CT-guided percutaneous cyst aspiration followed by sclerotherapy. If percutaneous treatment is unavailable or ineffective, treatment may include either laparoscopic or open surgical cyst fenestration. Unroofing of the extrahepatic portion of the cyst may be done.We report a case of simple hepatic cyst that presented with abdominal pain and its management.

Keyword*: hepatic cyst, congenital, laparoscopic deroofing.*

Date of Submission: 24-09-2020 Date of Acceptance: 07-10-2020

I. Introduction

The term hepatic cyst usually refers to solitary non-parasitic cysts of the liver also known as simple cysts[1,2]. 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. The optimal management of non-parasitic hepatic cyst is a topic of debate[3].Nonsurgical treatment consists of aspiration and injection of a sclerosing agent. Few studies have documented long-term follow-up of sclerotherapy for hepatic cysts. Surgical therapy is achieved by fenestration or unroofing of the portion of the cyst that is extrahepatic. This can be performed at laparotomy with good long-term results or through laparoscopic approaches. The laparoscopic approach is favored, but long-term efficacy has not been well documented.[4]A meta-analysis including nine retrospective case-control studies involving 657 patients comparing laparoscopic fenestration with the open approach demonstrated that the laparoscopic approach was associated with shorter operative time, shorter hospital stay, and less operative blood loss with no difference in cyst recurrence rates.[5]We report a case of simple hepatic cyst that presented with abdominal pain and its management.

II. Case Report

History

A 65 years old male, farmer by occupation was admitted with abdominal pain for 12 days, vague in nature, in theupper abdominal region with no specific aggravating or relieving factors.There was no history of nausea, vomiting, fever or trauma. There was no history ofdyspepsia, constipation, melena, hematemesis, jaundice, loss of weight or loss of appetite**.**History ofbronchial asthma and hypertension and on regular treatment**.** He is a non-alcoholic and non-smoker.

General examination

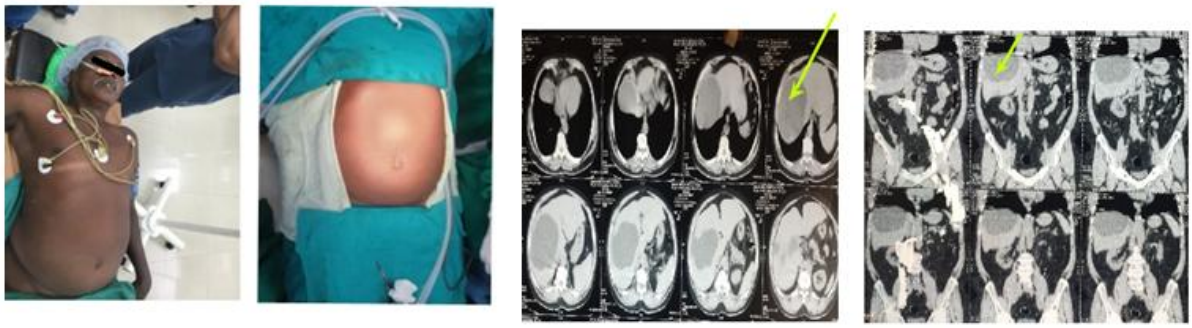
Patient was conscious and oriented. He was afebrile, hydration status was fair. He was neither pale nor icteric. His vital signs were within normal limits.

Examination of abdomen:

Fullness was seen in epigastric and right hypochondrial region. All quadrants moved with respiration. There were no scars, sinuses or dilated veins. No local rise in temperature felt. There was mild Right Hypochondrial tenderness.No guarding or rigidity.Hepatomegaly wasseen- Liver palpable 4cm below the subcostal margin. On percussion liver span was 16 cm. Bowel sounds were heard normally.PR Examination showed normal fecal staining, normal sphincter tone. No mass was palpable.

Investigations:

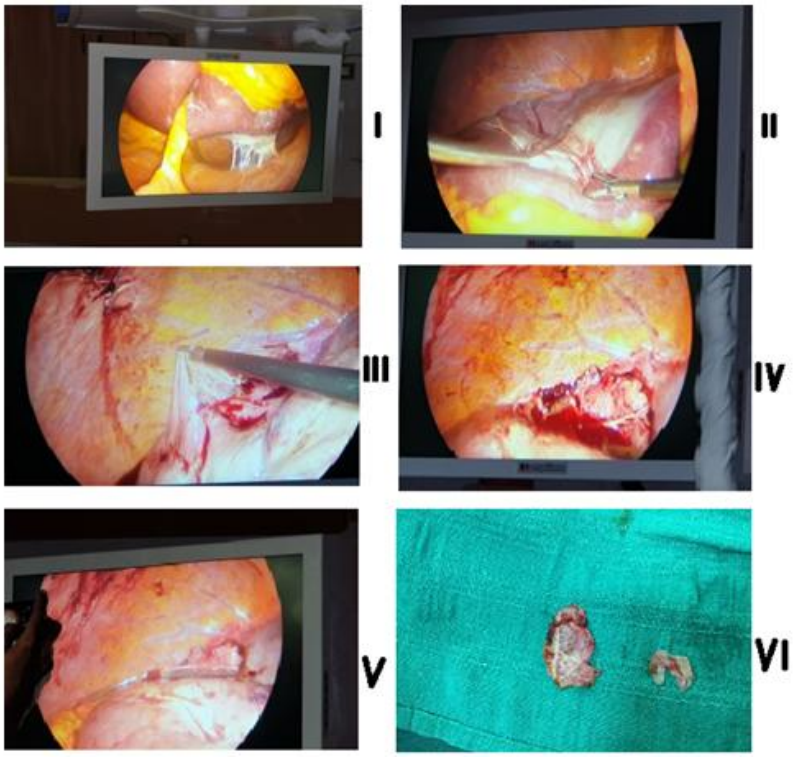
Haemogram showed a haemoglobin of 13.3g/dl, white blood cells $9.5x10^3$/ul and platelets $218x10^3$/ul. Renal functions test, Serum electrolytes, liver function tests (Total bilirubin –1.2 mg/dl, conjugated bilirubin-0.5 mg/dl, AST - 46mg/dl, ALT - 43mg/dl, ALP - 64mg/dl) were normal. He was hepatitis B virus (HBV) and hepatitis C virus (HCV) negative. Radiology showed a normal chest X-ray. Ultrasound abdomen & pelvis showed well defined irregular shaped anechoic lesion of size 11.5× 10.5cm with few thin internal septationswith no internal solid components noted in right lobe involving segments V, VI, VII, VIII in the sub capsular region.Large benign hepatic cyst in right lobe of liver with no sonographic evidence of rupture.CECT abdomen & pelvis showed a well defined hypodense lesion (HU- 15 to 20, fluid dense) noted in the right lobe of liver more in segment VII and VIII with no posterior enhancement of contrast.



Treatment:

A preoperative diagnosis of simple hepatic cyst was made. USG Guided aspiration of cyst was tried and failed. Laparoscopic Deroofing was done electively under generalanaesthesia.

Intraoperative findings:



I & II -Cystic lesion in the right lobe of liver in the posterosuperior region with adhesions to the posterior abdominal wall.
& IV-Deroofing of the cyst wall done.
V-Serous fluid suctioned out.
VI-Specimen was(Cyst wall) sent for HPE.

Histopathological Report:
Sections studied shows a cyst wall composed of fibrocollagenous connective tissue, No epithelial lining is seen. Portion of liver parenchyma with adjacent biliary ducts are seen attached to the cyst wall.
Impression: Features suggestive of pseudocyst,
Follow-up USG was done at 4th, 8th and 16th weeks. Postoperative visits revealed no recurrence of cyst clinically or ultrasonographically. Patient was relieved of symptoms.

III. Discussion

Developmental	Inflammatory	Neoplastic	Trauma related
Simple cyst	Pyogenic abscess	Biliary cystadenoma	Biloma
Biliary hamartoma	Amoebic abscess	Cystic HCC	Seroma
Caroli disease	Hydatid cyst	Cystic metastasis	Hematoma
Polycystic liver disease	Fungal micro abscess	Undifferentiated embryonal carcinoma	
Ciliated foregut duplication cyst	Intrahepatic pseudocyst		

CYSTIC DISEASES OF LIVER:
Congenital hepatic cysts:

The majority of hepatic cysts are asymptomatic. Hepatic cystsare usually identified incidentally and can occur at any timethroughout life. The most common benign lesion found in theliver is the congenital or simple cyst. The exact prevalence ofsimple hepatic cysts in the U.S. population is not known, but thefemale to male ratio is approximately 4:1, and the prevalenceis approximately 2.8% to 3.6%.[6] Simple cysts are the result ofexcluded hyperplastic bile duct rests. They are the result of deranged development of biliary tree (von Meyenburg complex) with no communication to the biliary tree.The cystepithelium is cuboidal and secretes a clear nonbilious serousfluid. 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[7].

With the exception of large cysts, simple cysts are usuallyasymptomatic. Large simple cysts may cause abdominal pain,epigastric fullness, and early satiety. Occasionally the affectedpatient presents with an abdominal mass. Complications include hemorrhage or superinfection. The most common complication isintracystic bleeding, but overall, complications are rare. Sequelae like internal septations, rimcalcification may develop.

Asymptomatic simple cysts are best managed conservatively. Simple cysts usually areidentified in hepatic imaging studies as thin-walled, homogeneous,fluid-filled structures with few to noseptations. Ultrasonography shows round or ovoid cystic lesions with imperceptible wall, multiple, well defined margins, anechoic structure, showing posterior wall enhancement and increased through transmission. CT & MRI shows simple cysts having attenuation (0-15 HU) and signal intensity (T1 hypointensity, T2 hyperintensity) similar to water. Simple cysts do not show enhancement, and can rarely become complex.

Hydatid disease, cystadenomaand metastatic neuroendocrine tumor are the mostimportant differential diagnoses to consider. Hydatid cyst shows well circumscribed lesion, with budding signs on the cyst membrane and may contain free floating hyperechogenic hydatid sand. Rosette appearance and calcification of cyst wall may be seen. A thick or nodularwall raises the suspicion of a cystadenoma but can also representhemorrhage within the cyst.

The preferred treatment for symptomatic cysts is ultrasoundor CT-guided percutaneous cyst aspiration followed bysclerotherapy. This approach is approximately 90% effectivein controlling symptoms and ablating the cyst cavity. If percutaneoustreatment is unavailable or ineffective,treatment mayinclude either laparoscopic or open surgical cyst fenestration.The laparoscopic approach is being used more frequently andis 90% effective. Unroofing of the extrahepatic portion of the cyst may be done.The excised cyst wall is sent for pathologicanalysis to exclude the presence of carcinoma, and the remainingcyst wall must be carefully inspected for evidence of neoplasticchange. If such change is present, complete resection isrequired, either by enucleation or formal hepatic resection.

IV. Conclusion

The majority of hepatic cysts are asymptomatic.The most common benign lesion found in theliver is the congenital or simple cyst.They are the result of deranged development of biliary tree with no communication to the biliary tree. Simple hepatic cysts rarely cause symptoms, however they become

symptomatic due to mass effect, rupture, haemorrhage, and infection.The optimal management of non-parasitic hepatic cyst is a topic of debate.Nonsurgical treatment consists of aspiration and injection of a sclerosing agent. Surgical therapy is achieved by fenestration or unroofing of the portion of the cyst that is extrahepatic.

References

[1]. Ismali KA, Mousa GI, El Khadrawy OH, Mohamed HA. Symptomatic non- parasitic benign hepatic cyst: Evaluation of management by deroofing in ten consecutive cases. Ann Paed Surg. 2010;6(2):83–89. [Google Scholar]

[2]. Jackson HH, Mulvihill SJ. Hepatic cysts. available at http;//emedicine medscape.com/article/190818-overwiew. Updated March 11 2010.

[3]. Mazza OM, Fernandez DL, Pekoli J, Pfaffen G, Sanchez CR, Molmenti EP, de Santibanes E. Management of non-parasitic hepatic cysts. J Am Coll Surg. 2009;209(6):733–739. [PubMed] [Google Scholar]

[4]. Mimatsu K, Oida T, Kawasaki A, et al: Long-term outcome of laparoscopic deroofing for symptomatic nonparasitic liver cysts. *Hepatogastroenterology*56:850–853, 2009.

[5]. Qiu JG, Wu H, Jiang H, et al: Laparoscopic fenestration vs open fenestration in patients with congenital hepatic cysts: A meta-analysis. *World J Gastroenterol* 17:3359–3365, 2003.

[6]. Caremani M, Vincenti A, Benci A, Sassoli S, Tacconi D. Ecographicepidemiology of non-parasitic hepatic cysts. *J ClinUltrasound*. 1993;21(2):115-118.

[7]. Yawai H, Tada N. A simple hepatic cyst with elevated serum and cyst fluid CA19-9 levels: a case report. J Med Case Report. 2008;2:329. [PMC free article] [PubMed] [Google Scholar]

Dr. Kalaranjani, et. al. "Simple Hepatic Cyst: A Case Report." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 19(10), 2020, pp. 53-56.