

Giant Non Parasitic Hepatic Cyst: Case Report and Review of Literature

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Abstract: *Benign Hepatic cysts can be divided into parasitic and non parasitic. The majority of patients with on parasitic liver cysts are asymptomatic. Cysts are usually diagnosed incidentally at laparotomy or on radiological investigations done for some other reasons. Symptomatic cases are very uncommon and require perative treatment. Here we report a case of 45 year old female presented with a symptomatic solitary huge non parasitic liver cyst. It was treated by wide unroofing of the cyst by an exploratory laparotomy.*

Keywords: Non Parasitic, Hepatic Cyst, Exploratory Laparotomy, Ct Scan, Unroofing

1. Introduction

Hepatic cystic lesion represents a comprehensive heterogenous cluster with regards to pathogenesis, clinical presentation, diagnostic findings and therapeutic management. The term hepatic cyst usually refers to solitary non parasitic cyst of the liver also known as simple cyst. However several other cystic lesions must be distinguished from the simple cyst eg. Parasitic or hydatid cyst, multiple cystic lesions of polycystic liver disease, cystic tumours. This condition can be distinguished on the basis of patient's symptoms, clinical history and radiological appearance of the lesion. Majority of non parasitic hepatic cyst remains asymptomatic and are found as a mere coincidentally on abdominal imaging techniques such as USG, MRI and CT.^(1,2) There is currently a general argument that only symptomatic cyst should be treated.⁽³⁾ The treatment options for these patients are enucleation, partial hepatic resection, incision and external or internal drainage, wide unroofing. This case reports wide unroofing of a symptomatic giant non parasitic hepatic cyst.

2. Case

A 45 year old woman, presented with a two months history of pain in abdomen and fullness in right upper abdomen. Abdominal pain was continuous dull aching and without any aggravating and relieving factors and without nausea vomiting, dyspepsia and weight loss.

Examination revealed a tense mass with smooth surface and ill defined edges in right hypochondrium not separate from liver, extending approximately 6 to 8 cm below right costal margin. Rest of the abdomen spleen was normal. General examination was normal. Liver function tests were normal. A contrast CT Abdomen revealed a large simple cyst measuring 18 X 12cm in the right lobe with two other small cysts in adjacent area (figure 1) without any daughter cysts or intra hepatic biliary radical dilatation. In view of her symptoms a exploratory Laparotomy was carried out with right subcostal incision for adequate exposure. A 20 cm thin walled cyst was found which occupied superior and anterior surface of right lobe of liver. Full mobilisation of liver achieved by dividing falciform ligament. The cyst was

decapped using diathermy and 2 litres of clear fluid was drained. There was no evidence of apparent biliary communication with the cyst. Then Marsupialization of the cyst was performed by partial and adequate wall resection (figure 2). The cut edges of the cyst wall was underlaid with hemostatic continuous polyglycolic acid sutures. The cyst cavity was packed with omentum. The abdominal cavity was closed with abdominal drain. Pathological examination of excised liver cyst wall confirmed the benign nature of the cyst.

Laboratory examinations such as the routine hematological, hepatic and renal functions were within normal limits at one week after operation. Ultrasonography revealed no abnormalities. The patient was discharged on 10th postoperative day with no sign of cholangitis or pain in abdomen.

3. Discussion

Cystic liver lesion requires accurate pre treatment diagnosis in order to select appropriate therapy for each patient as they can represent malignant or benign formations. NPHCs occur in upto 5% population^(4,5). Women are more frequently affected.⁽⁶⁾ 10 to 16% with liver cyst develops symptoms at some stage of life.⁽⁷⁾ Symptoms develop at advanced age and are largely non specific like pain, nausea, early satiety, vomiting or heart burn.⁽⁸⁾ Previously reported complications of liver cyst includes hemorrhage, torsion, biliary fistula rupture, infection, malignancy. It should be stressed that attribution of symptoms to simple cyst should be undertaken with caution after excluding alternative diagnosis. Alternative explanation for symptoms in patients with simple liver cysts are biliary colic, GERD, PUD, NUD, IBS, chronic pancreatitis.⁽⁹⁾ Upper abdo pain(33%) is more specific and relevant for decision making. Only symptomatic cases should be operated.⁽¹⁰⁾ Imaging modalities like USG, CT, MRI are highly accurate for diagnosing simple cysts. Large difference in echogenicity between hepatic parenchyma and cyst fluid allow for easy recognition by USG.⁽¹¹⁾ On CT simple cyst appears as well demarcated, water density sacs which do not show enlargement after iv contrast.⁽¹²⁾ The presence of septations suggest that cyst is not simple, occasionally large simple cyst may have

septations. MRI shows simple cyst as hypointense lesion on T₁ weighted image and hyperintense on T₂ weighted image.^(13,14) Radiologic characteristics which would argue against the simple cyst being simple include thick wall, peripheral enhancement on CT or MRI, heterogeneity within the cyst and an increase in size over time.⁽¹⁵⁾ The vast majority of simple hepatic cyst requires treatment. Large cysts (diameter 4cm or more) can be followed for stability with repeated imaging if cysts remain unchanged for 2 yrs then further monitoring discontinued.⁽¹⁶⁾ Symptomatic or enlarging cyst requires consideration of alternate diagnosis including cyst adenoma, cystadenocarcinoma and hepatic metastasis. Treatment options include needle aspiration with or without injection of sclerotic, internal drainage with cystojejunostomy, wide unroofing and different degrees of liver resection.⁽¹⁶⁾ Surgical deroofing is the most effective treatment option for symptomatic liver cyst. Percutaneous USG or CT guided needle aspiration of hepatic cysts associated with high recurrence rate.(78% -100%)^(17,18) Several small case studies have demonstrated efficacy for the performance of USG or CT guided needle aspiration of hepatic cyst combined with alcohol injection.⁽¹⁹⁻²²⁾ because USG guided aspiration with ethanol sclerosis is generally safe, effective and relatively non invasive, it may be first line treatment in patients with high surgical risk.⁽²³⁾ Recurrence may occur if alcohol does not come in contact with all cells of cyst cavity.⁽²⁴⁾ Combination of percutaneous aspiration with other sclerosing substances such as ophendylate⁽²⁵⁾ tetracycline chloride,⁽²⁶⁻²⁹⁾ doxycycline,⁽²⁹⁾ hypertonic saline solution⁽³⁰⁾ also achieved good results. Several recent studies documented good results for deroofing with widest possible excision of cyst wall and concomitant argon laser coagulation or electrocoagulation may improve durability of results. Recurrence is 0-20% and morbidity 0-25%.⁽³¹⁾ Reported complications of laparoscopic deroofing includes wound infection, bile leak, chest infection, subphrenic hematoma and prolonged post procedure drainage. Whereas sclerosis is less invasive and associated with lower rate of complications, deroofing is effective and provides opportunity to directly examine the cyst intensions to rule out etiologies other than hepatic cysts.⁽³²⁾ It is important to rule out biliary communication before sclerosing cyst to avoid complication of sclerosing cholangitis.

In summary, we present the case of large symptomatic simple hepatic cyst, we established the cyst was the cause of symptoms only after excluding alternative diagnoses through testing and empirical therapy. The usual standard management for hepatic cyst is non operative but our case demonstrated that large cysts occasionally responsible for symptoms.

4. Figure Legends

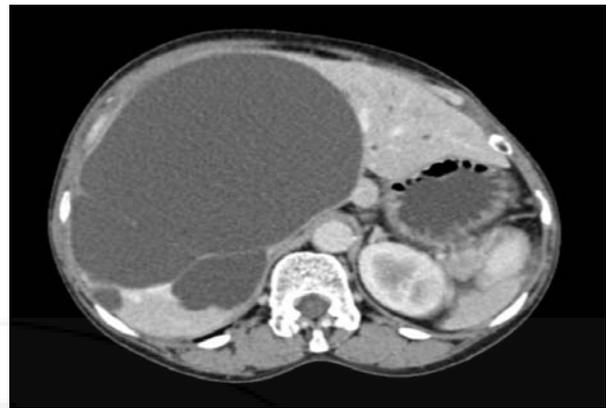


Figure 1: CECT showing large hepatic cyst

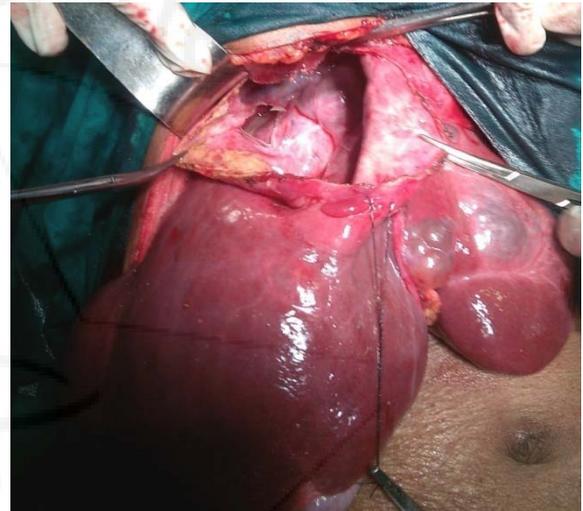


Figure 2: Giant non parasitic hepatic cyst

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