

Hepatic Symptomatic Cysts: Report Of 4 Cases

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Citation

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Abstract

Hepatic biliary cysts are congenital formations that are most often asymptomatic. Their diagnosis is easy with ultrasound and CT scans when they are simple. The treatment is only for symptomatic cysts. The aim of our study was to report our experience regarding the diagnosis and management of symptomatic hepatic cysts by relying on four cases diagnosed in the Department of General Surgery at Aristide Le Dantec Hospital.

In 2009, there were 4 women consulting for abdominal mass and/or pain. The diagnosis of a simple hepatic cyst had been made on ultrasound and/or CT scan with negativity at anti-amebic and hydatid serology. Laparoscopic fenestration was performed on 3 patients and cystectomy on one. Histology confirmed the diagnosis, and no recurrence was noticed after 1 year follow-up.

INTRODUCTION

Hepatic biliary cysts are congenital formations that are most often asymptomatic. Their diagnosis is easy with ultrasound and CT scans when they are simple. Complicated, they can be confused with tumor lesions or parasites. The treatment is only for symptomatic cysts. The aim of our study was to report our experience regarding the diagnosis and management of symptomatic hepatic cysts by relying on four cases diagnosed in the Department of General Surgery at Aristide Le Dantec Hospital.

CASES REPORT

Patient 1: A 54-year-old female patient with no significant history consulted because of pain in the right upper quadrant lasting for months associated with nausea. On examination, she presented a good general condition with colored mucous membranes and was anicteric. A firm insensitive mass was palpated in the right upper quadrant. Amebic and hydatid serologies were negative. The liver function was normal. The abdominal scan objectified a cyst of 15cm on segments II, IV and VIII juxta-hilar with portal rolling and duodenopancreatic and vesicular compression (Figure 1). On laparoscopic exploration, a cyst of about 15cm from the left lobe of the liver with multiple adhesions was found. She received a paracentesis followed by fenestration and an omental flap in the cystic cavity. The wall of the prominent dome was removed within a surgical glove (Figures 2, 3).

Figure 1

Juxta-hilar hepatic cyst with portal rolling, duodenopancreatic and vesicular compression (Photos Dr. Cissé).

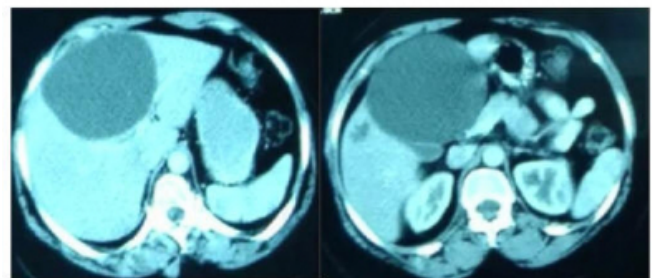


Figure 2

Cyst puncture and fenestration (Photo Dr. Cissé).

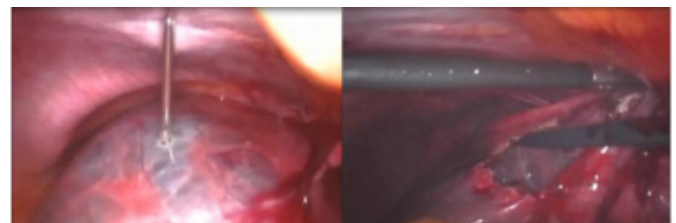
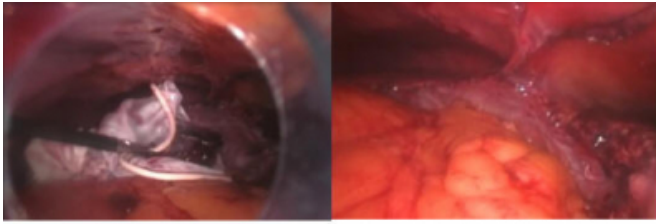


Figure 3

Removing the cyst wall by glove and omental flap (Photo Dr. Cissé).



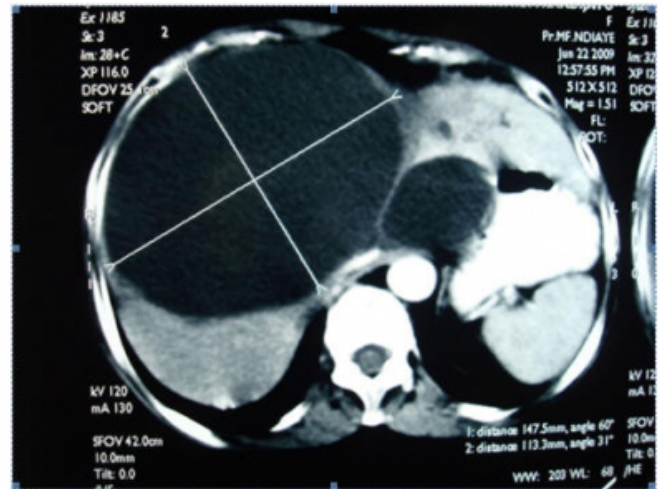
The postoperative course was uneventful. The patient was discharged on the 5th postoperative day. Pathological examination showed a single hepatic cyst wall with no signs of epithelial malignancy. No recurrence after 1 year of follow-up was observed.

Patient 2: A female patient of 57 years was followed in Mauritania for 26 years for a simple hepatic cyst with pain for about 5 years. Upon examination, we found an altered condition. Complete blood count (CBC) was normal. Hydatid and amebic serologies were negative. The liver function was normal. Abdominal ultrasonography objectified a large hepatic cyst with thin wall and homogeneous content. The abdominal scan was talking about a homogeneous thick-walled fluid collection in the right hepatic lobe and concluded that a hydatid cyst stage I was likely. Laparoscopy revealed a right hepatic cyst of 20cm by 12cm with a thin wall. She received a puncture-aspiration of approximately 1000cc of cyst fluid, associated with fenestration of the cyst and omental flap in the cavity of the cyst. The postoperative care consisted of an antibiotic prophylaxis based on amoxicillin and clavulanic acid. The postoperative course was uncomplicated and the medical discharge took place on the 5th postoperative day. The pathological examination of the resected specimen of the protruding dome of the cyst was in favor of a simple hepatic cyst. A postoperative follow-up of 1 year revealed no recurrence of symptoms in this patient.

Patient 3: A female patient of 65 years with a history of pulmonary tuberculosis treated and cured 7 years ago consulted for abdominal pain (type of bite) at the right upper quadrant and nausea lasting for 7 months. The examination revealed hepatomegaly with bumpy surface and a liver diameter of 14 cm. The CBC was unremarkable. Hydatid and amebic serologies were negative. The liver test was normal. CT scan revealed a polycystic liver with outlet compression of adjacent biliary, pancreatic and digestive structures (Figure 4).

Figure 4

Polycystic liver with compression of adjacent structures (Photos Dr. AO Touré).

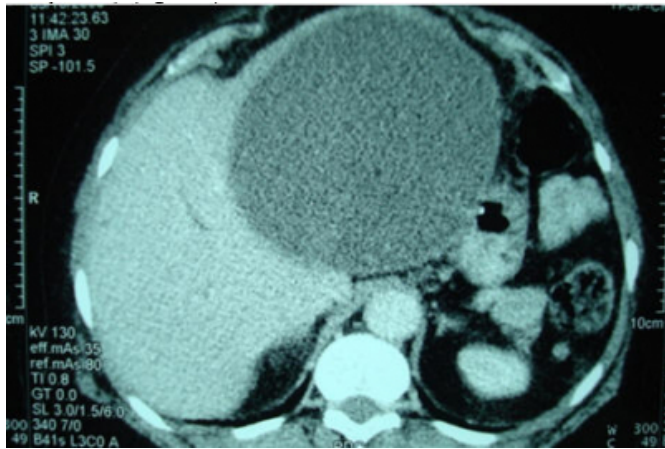


Exploration by open laparoscopy objectified 2 large cysts (about 10cm in diameter) of the hepatic dome, about 3 inches from the underside of the liver. She received puncture, aspiration, and fenestration of the cyst, and suction drainage. The postoperative care consisted of analgesia based on paracetamol. The drains were removed on the 2nd postoperative day. The postoperative course was uncomplicated and the medical discharge took place on the 4th postoperative day. Histological examination of the resected specimen of the protruding dome of the cyst was in favor of a simple hepatic cyst. A 1-year follow-up revealed no recurrence in this patient.

Patient 4: A 61-year-old female patient, treated for hypertension for 10 years, consulted for an epigastric mass present for 3 months, painless and gradually increasing in volume, sometimes with a sensation of epigastric heaviness. The examination revealed a firm epigastric mass, rounded, painless, moveable relative to the plane surface, with a long axis measuring about 15cm. The blood cell count was unremarkable. The liver function was normal. Abdominal ultrasound evoked a pancreatic pseudocyst or cyst of the underside of the liver. The CT scan appearance was in favor of a cystic liver (segments II and III) looking benign (14cm by 15cm) (Figure 5).

Figure 5

Simple liver cyst of segments II and III (Photo Dr. AOTouré).



A midline supraumbilical laparotomy objectified a large cyst of 25cm by 15cm developed at the expense of the left lobe of the liver to lower protruding dome with multiple adhesions. She received a cystectomy, after aspiration of 1800cc of hemorrhagic fluid, and drainage by a Delbet drain.

Postoperatively, she received antibiotic prophylaxis and analgesia. The drain was mobilized on day 2 and removed on the 3rd postoperative day. The postoperative course was uncomplicated and the medical discharge took place on the 6th postoperative day. The pathological examination of the piece of cystectomy showed a cyst wall without evidence of cellular atypia. Postoperative follow-up after 1 year showed no recurrence

DISCUSSION

Liver cysts were considered rare for a long time since the initial work only considered the complicated cysts. That effect is now better appreciated by ultrasound [1; 2; 3; 4]. The incidence varies between 1 and 5%. The age of onset is late with a peak between 50 and 60 years as in our study [2; 3].

Only a small fraction of non-parasitic cysts are symptomatic. Sanfelippo and al. objectified a prevalence of 0.02% of symptomatic cysts in their series [5]. Only cysts of 10cm or more manifest clinically as an abdominal mass or by pain as noticed in our patients. These two signs are found in more than 50% of patients [6]. Other symptoms such as nausea, vomiting or jaundice may be encountered but these signs are not specific. It should also seek a notion of taking estrogen plus progestin to eliminate hepatic adenoma which appears mainly in women.

Biology has little to contribute. At best, it allows for the differential diagnosis through amebic and anti-echinococcal

serology and there is generally no increase of CA 19-9 in blood except in case of cholestasis [4; 7]. Histology confirms the diagnosis as in our study.

The imagery has its importance in the diagnosis of simple cysts that are especially lesions discovered incidentally. Abdominal ultrasonography is the gold standard. It has a sensitivity and specificity above 90%, and it shows a hepatic cyst as an anechoic lesion, unilocular with thin walls. The distinction, however, may be difficult to make between simple and hydatid cyst stage I of Gharbi [4; 6; 7].

Ultrasound can also guide a potential puncture-aspiration. In our study, ultrasound was hesitating between the diagnoses of pancreatic pseudo-cyst and hepatic cyst in one case. Contrast-enhanced CT scan, in addition to confirm the diagnosis, is more sensitive than sonography in determining the location and rapport of hepatic cyst with surrounding structures such as blood vessels, bile ducts and viscera [6; 8]. It has a sensitivity and specificity of 95% [6]. However, the differential diagnosis between hydatid cyst stage I of Gharbi and hepatic simple cyst can be difficult, as found in a case of our study.

Therapeutic abstention is the rule for asymptomatic cysts. Moreover, some cases of spontaneous regression have been reported [9]. Treatment is indisputable in case of symptoms and/or diagnostic doubt, as in our patients.

Echo-guided puncture helps relieve symptoms but is exposed to early recurrence [1; 2; 4; 6]. It is recommended to add a percutaneous alcohol or application of sclerosing substances such as tetracycline except in cases of hemorrhagic cysts or communication with the biliary tract [1; 2; 4; 6]. Rhim promoted radiofrequency thermotherapy in place of sclerotherapy presenting a case treated by this method with 2 years without recurrence [10]. Due to the unavailability of these methods, none of our patients could benefit from them.

First described in 1968 by Lin, fenestration after paracentesis appears to be sufficient with a recurrence rate of almost zero. Its boundaries are the posterior locations [11; 12; 13; 14; 15; 16; 17]. It is usually performed laparoscopically as for 3 of our patients. Kwon and al. advocated cauterization of the cyst wall by argon beam coagulator to remove its residual secretion [18]. Total cystectomy was performed in one of our patients. It seems to be the best technique, is able to significantly reduce recidivism and is justified in cases of diagnostic doubt. But it carries a risk of vascular injury, particularly in cases of juxta-hilar biliary cysts, as in one of our patients [4; 15; 18]. Cysto-jejunostomy with Roux-en-Y anastomosis is

exceptionally indicated for communication with the biliary tree. Liver resection of the part carrying the cyst is indicated in cases of intracystic nodules, and massive intracystic hemorrhage of large cysts in the left lobe [2; 4; 19]. Liver transplantation is a radical solution indicated in cases of polycystic liver complicated with strong alteration of liver function [1; 2; 6].

Postoperative complications in type of bile leakage or bleeding were not found in our cases. They are low after fenestration, and vary between 6.8 and 18.7% according to some studies [14; 15; 20]. Recurrence rates are often lower after deroofting but they are generally based on length of follow-up. Loeh found a 32% rate of recurrence in the first year and then 8.3% after 3 years of follow-up [14]. Tan and Mazoch have rates below 7% in their series after at least 20 months follow-up [15; 17]. In our case, the mean follow-up was 12 months with a recurrence rate of zero. The figures in our study may be reconsidered after a longer follow-up, especially since a patient had a polycystic liver.

CONCLUSION

Hepatic cysts become symptomatic when their size reaches 10cm or when they are complicated. In these cases, diagnosis is based on ultrasonography and computed tomography because the symptoms are not specific. There are several instrumental techniques and surgical methods, but laparoscopic fenestration seems to be the gold standard in the treatment of symptomatic cysts. Whether or not related to methods such as omental flap, designed to minimize the rate of recidivism, the results are satisfactory.

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