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Case Report

Recurrent non-parasitic hepatic cyst with jaundice: a case report

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ABSTRACT

The prevalence of simple hepatic cyst is 5-10% worldwide and usually does not require surgical intervention unless the patient becomes symptomatic. After laparoscopic surgical treatment there is a high chance of recurrence. Recurrence have been treated on individual basis by different centers either by laparoscopy or open cystectomy. A case of recurrent simple cyst of liver with obstructive jaundice in a 42-year-old lady treated by open cystectomy is presented.

Keywords: Simple liver cyst, Recurrence, Laparoscopic deroofing, Open cystectomy

INTRODUCTION

Simple non-parasitic hepatic cyst (NPHC) affects up to 5-10% of the population and often asymptomatic. Hepatic cysts include simple cyst, polycystic liver disease (PCLD), parasitic cyst, abscess and cystic tumours.[1] Simple liver cysts (SLCs) constitute the most common hepatic cyst and only symptomatic patient warrants intervention.[2] Laparoscopic deroofing is generally accepted as it offers the best balance between efficacy and safety. However, the recurrence rate reported varies from 0%-25%.[4]

Recurrences have been treated on individual basis with some centers performing percutaneous sclerotherapy, laparoscopic cystectomy and others performing open cystectomy.[3,4]

A 42-year-old female presented to us with a recurrent simple cyst with jaundice and occupying segments IV, V and VIII of the liver and underwent open total cystectomy.

We report this case for its recurrence, compression of the biliary tract causing jaundice and the liver segments involvement.

CASE REPORT

A 42-year-old lady came to the hospital with complaints of upper abdominal pain over the central and right upper quadrant for 2 months which was dull aching, insidious in onset and gradually progressive. Patient also gave history of passing high colored urine and itching over the abdomen for the past one month. On examination icterus was present and a 5×5 cm tender mass was palpable over the right hypochondrium with a liver span of 17 cm. Laboratory values revealed total bilirubin of 5.6mg/dl and alkaline phosphatase 470U/l. Patient had undergone laparoscopic peri-cystectomy 2 years prior to present admission for a cyst occupying segments IV and V of the liver. Cyst was adherent to the gall bladder and hence gall bladder was removed along with the cyst. Biopsy of the cyst reported as simple cyst. Patient underwent a CECT (Figure 1) that revealed a well-defined cystic lesion with a volume of 988cc with multiple thin internal septations involving segments IV, V and VIII of the liver.

The lesion was causing a mass effect with lateral displacement of Antro pyloric region, first part of the duodenum, pancreas and the great vessels. At laparotomy a tense cyst (Figure 2) was noted on the under-surface liver involving segments IV, V, VIII. The cyst was

compressing the right hepatic duct. About 1 litre of clear fluid was drained. Cyst was excise in toto and was sent for HPE which showed features suggestive of Simple cyst. Follow up of the patient was done after 1 year ultrasound abdomen showed no recurrence.

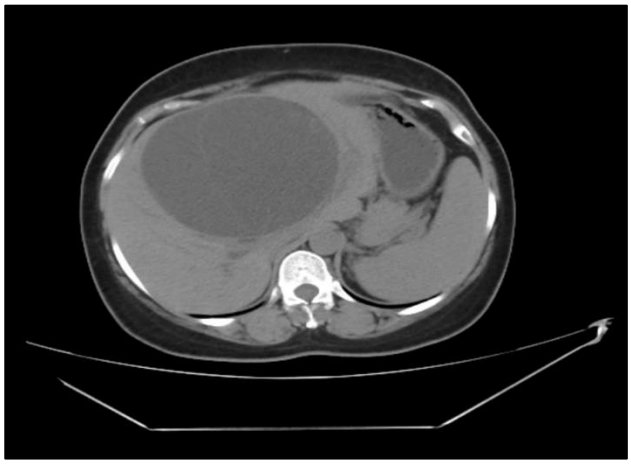

Figure 1: A well-defined cystic lesion 13.1×10.9×13.7 cm (vol:988cc) with multiple thin internal septations arising from the left lobe of liver with focal intrahepatic biliary dilatation.

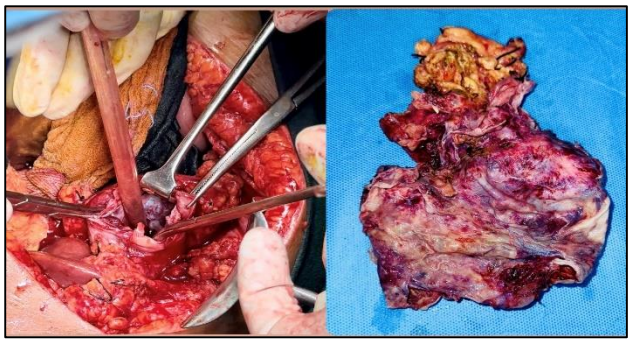

Figure 2: Open cystectomy under general anesthesia.

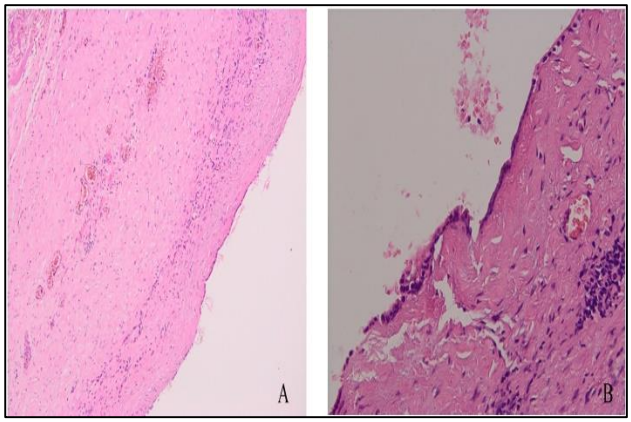

Figure 3: Histopathology image of simple hepatic cyst. (A) Hematoxylin and eosin staining X100; (B) hematoxylin and eosin staining X400.

DISCUSSION

Simple NPHC affects up to 5% of population. Laparoscopic deroofing for symptomatic cyst is generally accepted as it is effective and safe. However, in 0-25% cases the cyst recurs. There are several studies addressing the surgical management of NPHC, but there are not enough studies that directly discusses the management of recurrence of these cysts. Patients with recurrences have been managed on individual basis. It is important to define recurrence as a symptomatic clinical recurrence, not a radiologic one as symptomatic cyst needs only observation.

Our patient presented with painful mass and jaundice due to compression of the right hepatic duct. Since recurrence is relatively common, it is important to determine the factors that increase the risk of recurrence and to identify the best approach to manage these recurrences. Some factors have been identified, such as inadequate deroofing and laparoscopic deroofing of cysts where adhesion formation may encourage recurrence and also the location of the cysts, as in deep-seated cysts and cysts in the posterior segments of the liver, close to the diaphragm.[5] As early as 1996 Gigot et al observed that all the recurrent cyst that occurred in patients had an incomplete deroofing procedure.[5] A similar study was later done by Petri et al who attributed 38.8% recurrence rate stating that laparoscopic deroofing was not sufficient enough.[6]

Another key factor which influences the surgical outcome is the location of the cyst. In most cases, the anatomical suitability of the hepatic cyst for laparoscopic deroofing is based on the surgeon's experience and confidence. Laparoscopic deroofing is considered to be safe for the cyst located in segment II , III in the left lobe or segments V and VI in the right lobe.[4] The cyst located in segment VII , VIII and IVa , the risk of recurrence is on the higher side probably because of 2 factors i) the technical difficulty to perform an appropriate and complete laparoscopic deroofing ii) early formation of adhesion between the deroofed cyst and diaphragm.[4] Hence the outcome of laparoscopic deroofing of cyst located in these segments is more prone to recur as in this patient cyst was involving the segment IV , V and VIII.

CONCLUSION

Simple non-parasitic liver cyst are treated conservatively. Current standard of care for symptomatic cyst is laparoscopic approach. However, recurrences are common after laparoscopic deroofing or partial excision especially for cyst involving the posterior segments or associated complication like obstructive jaundice. In these patients open cystectomy may be the preferred treatment.

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