Giant simple hepatic cyst: a case report and review of relevant literature

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Abstract

Background: Giant cysts of the liver are uncommon. Symptoms are related primarily to the mass effect of the enlarging cyst.

Objective: To highlight the challenges of management of giant simple hepatic cyst in a resource limited setting.

Case report: Presented is a 58-year-old seamstress with a 5-year history of an enlarging abdominal mass with easy satiety. Surgery revealed an exophytic giant simple hepatic cyst arising from liver segment IV that drained 4.6 litres of serous fluid.

Conclusion: Simple hepatic cyst can attain giant dimensions and should be considered in the differential diagnosis of intra-abdominal masses.

Keywords: Laparotomy, giant hepatic cyst, drainage, wide excision

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Introduction

The term hepatic cyst usually refers to solitary non-parasitic cysts of the liver also known as simple cysts. Giant cysts of the liver are uncommon. The cause of simple liver cysts is not known, but they are believed to be congenital in origin. Simple hepatic cysts rarely cause symptoms, however they become symptomatic 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. The optimal management of non-parasitic hepatic cyst is a topic of debate. Management options include percutaneous aspiration, injection of sclerosing agents, laparoscopic or open fenestration, and surgical cystectomy. We report a case of giant hepatic cyst that presented with an abdominal mass with gross distension of the abdomen to highlight management challenges in a resource-limited setting.

Case report

A 58-year-old seamstress presented with a progressively increasing abdominal mass of 5 years duration. Pain that was localised over the mass had been recurrent in the past 2 years. There was no prior history of trauma, no associated fever, nausea and vomiting. She however admitted to a history of easy satiety noticed over the past 2 years but not associated with any weight loss. There was no history of yellowness 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 right upper quadrant with a palpable mass lesion measuring 24cm x 20cm and extending below the umbilicus. The mass had limited horizontal 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 very dull over the mass and bowel sounds were normoactive. Digital rectal examination was unremarkable.

Haemogram showed a haemoglobin of 12.1g/dl, white blood cells (WBC) 6.5x10³/ul (neutrophils...
81%, eosinophils 6%, lymphocytes 13%), and platelets 298x10³/µl. Urea and electrolytes, liver function tests (Total bilirubin – 11.4umol/l, conjugated bilirubin– 4.2umol/l, AST – 30.1umol/l, ALT – 24.7umol/l, ALP – 89.9umol/l) were normal. She was hepatitis B virus (HBV) and hepatitis C virus (HCV) negative. Radiology showed a normal chest X-ray, abdominal ultrasonography (Figure 1), reported an extensive hypodense cystic mass that filled most of the abdomen probably omental cyst or mesenteric cyst. The liver was reported as normal. A preoperative diagnosis of an intra-abdominal cyst was made.

Figure 1: Abdominal ultrasonography

The patient was operated upon electively under general anaesthesia with endotracheal intubation and the operative findings were:

1. A giant thin walled solitary hepatic cyst (Figure 2)

Figure 2: Giant hepatic cyst in situ.

2. The cyst involved liver segment IV, extended exophytically into the abdomen and compressed liver segments II and III that appeared thinned out, Figure 3 showed liver segments V, VI, VII, and VIII on the right side of the cyst, (Couinaud’s line), it appeared normal with the gallbladder intact.

3. The stomach and small intestine were normal but compressed by the cyst and the ileum displaced to the lower abdomen. Other viscera were intact.

The cyst was opened and about 4.6 litres of serous fluid drained (Figures 4a and 4b).

A wide excision of the cyst wall was done resulting in a wide opening of the cystic cavity. Haemostasis was secured by over running suture with 3/0 vicryl around the edges of the remnant of the cyst wall. Biochemical analysis of the serous fluid (Figure 4b), showed Na – 143mmol/l, K – 3.9mmol/l, Cl – 109mmol/l, HCO₃ – 10mmol, urea – 0mmol/l and total protein 19g/l. The histology of the sac (Figure 5) showed columnar epithelium resembling biliary duct epithelium and reported as simple hepatic cyst. The postoperative period was uneventful, oral feeding commenced on the 2nd day post operation; sutures were removed on the 7th day after surgery and patient discharged for outpatient review after 10 days.

Postoperative visits in the outpatient on the 4th, 8th, and 12th weeks revealed no recurrence of cyst or ascites clinically or by ultrasonography.
Simple non-parasitic hepatic cysts are congenital and may be found incidentally at laparotomy or with radiographic imaging facilities. Giant simple hepatic cyst should be considered in the differential diagnosis of intra-abdominal masses.

**References**


