

Post-traumatic Hepatic Cyst: An unusual sequel of liver injury

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Citation

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Abstract

Traumatic cysts of liver are amongst the less frequently known sequelae of liver trauma. The incidence of this entity is very low. We report a case of large post-traumatic liver cyst in a young adult male, who sustained blunt abdominal trauma three months back. The cyst was diagnosed by CT scan and was treated by percutaneous drainage of the cyst with supra-cath under ultrasonic guidance. The aim of presentation of this report is to highlight the fact that this rare lesion can be safely treated by this alternative minimally invasive modality in an ambulatory setting.

INTRODUCTION

The most common non-parasitic cyst of the liver is congenital and it can be either solitary or multiple. Acquired hepatic cysts are even less common and may be inflammatory, neoplastic or traumatic. Although there is paucity of literature on symptomatic post traumatic cysts of liver, but they have been described in the literature. This case represents a typical natural history and demonstrates the usefulness of percutaneous drainage as an alternate minimally invasive modality of treatment.

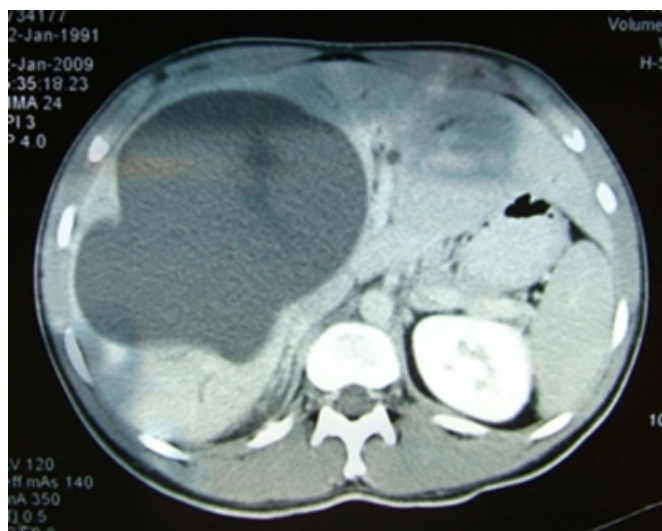
CASE REPORT

A 22-year, adult male, presented with complaints of right upper quadrant pain for two days with vomiting. Three months prior to these symptoms, he had been involved in a road accident leading to blunt abdominal trauma to the right upper abdomen and lower chest. Vitals of the patient were normal at that time and USG abdomen revealed small contusion in right lobe of liver, for which patient was managed conservatively and was discharged after three days of hospital stay. He remained asymptomatic for three months, after which he presented to us with above mentioned symptoms.

Physical examination of the abdomen revealed mild hepatomegaly. An abdominal ultrasound scan was performed, which demonstrated a 12×10 cm cystic lesion in the right lobe of liver. An abdominal CT scan demonstrated a large cystic mass in the right liver lobe consistent with a post-traumatic cyst (Fig.1).

Figure 1

Fig.1 : CECT abdomen showing a large cystic mass in the right lobe of liver.



The patient was then taken to sonology room and percutaneous drainage of the cyst was done with supra-cath under USG guidance. About one litre sero-haemorrhagic fluid was drained and the cystic cavity collapsed immediately. He was discharged home after this intervention with proper advice of drain care and regular follow-ups. About 50 cc of biliary fluid drained from the catheter daily for about two weeks, which gradually decreased and stopped completely in further two weeks time. So the supra-cath from the cavity was removed after four weeks. At three months follow-up, patient is symptom free, with no evidence of recurrence.

DISCUSSION

Acquired hepatic cysts are less common than the congenital variety and may be inflammatory, neoplastic or traumatic. Symptomatic post-traumatic cysts of liver are amongst the less frequently known sequelae of liver trauma. The incidence of this entity is very low and has been reported to be less than 0.5 percent.² Abdominal pain, distension and hepatomegaly were the most common presenting features in the cases described in literature. Rarely the cases may present due to complications of cyst like obstructive jaundice, abscess formation, haemorrhagic shock or biliary peritonitis because of cyst rupture.³ The present case presented with abdominal pain and hepatomegaly.

Christopher has classified liver injury into three types – central, subcapsular and rupture with its capsule. It is central or intrahepatic variety which is associated with this complication. Intrahepatic rupture of liver tissue causes oozing of blood that usually results in the formation of a traumatic cyst. The bleeding may stop, while flow of bile may continue and hence the cyst continue to grow.⁴ Therefore, there is usually a delay of several days to several months after the hepatic trauma, before the patient becomes symptomatic.³⁴ Most authors are of the view that moderately severe trauma is a pre-requisite to the formation of a hepatic pseudocyst as the rupture of bile ducts and haemorrhage must occur to cause it.³⁵

Many workers who described post-traumatic hepatic cysts, did so in the pre-imaging era. It was Sugimoto et al in 1982 who emphasized the role of CT scan for the diagnosis of hepatic injuries.² He also highlighted the importance of serial CT examinations in such cases. The differential diagnosis of a post-traumatic liver cyst clinically and at imaging includes a solitary unilocular cyst, hydatid cyst, a pseudopancreatic cyst and loculated ascites specially due to tuberculosis.⁶ In a post-traumatic cyst, altered blood and bile are the chief constituents.⁵ Definitive diagnosis at histopathology is based on recognising a true epithelial lining in a unilocular hepatic cyst while a post-traumatic cyst

does not have a true epithelial lining.¹⁶

The modalities of treatment employed in the past for these cysts include simple drainage, marsupialisation of the cyst and repeated packings.³⁶ Few cases have been treated like hydatid cyst, by decortication of cyst wall and omentoplasty.⁷ Recently these lesions have been safely treated by laparoscopic excision with minimal morbidity.⁸ In the present case, we carried out percutaneous drainage of the cyst with supra-cath under USG guidance. Our patient had an uneventful postoperative period and a shorter hospital stay as compared to other methods previously described in the literature.

Through this case report, we want to emphasize the following points:-

- A vigilant follow-up by clinical and imaging examination is essential to monitor hepatic injury and to diagnose its rare sequelae like post-traumatic cyst.
- Per-cutaneous drainage with supra-cath in an ambulatory setting, is a safe and effective method of treatment in symptomatic post-traumatic cyst with minimal morbidity.

References

1. Henson SW Jr., Gray HK, Dockerty MB. Benign tumours of the liver Vs. Traumatic Cysts. *Surg Gynaec Obst* 1957; 104: 302-306.
2. Sugimoto T, Yoshioko T, Sawada Y, Sugimoto H, Maemur K. Post-traumatic cyst of the liver found on CT scan – A new concept. *J Trauma* 1982; 22: 747-800.
3. Jones HV, Harley HR. Traumatic cyst of the liver. *Br J Surg* 1970; 57: 468-70.
4. Christopher F. Rupture of the liver. *Ann Surg* 1936; 103: 461-64.
5. Walt AJ. Cyst and benign tumours of the liver. *Surg Clin North Am* 1977; 57: 449-64.
6. Peltokallio V. Non-parasitic cysts of the liver – A clinical study of 117 cases. *Ann Chir Gynecol Fenn* 1970; 59 (Suppl 174): 1-63.
7. Wu X, Tan JZ, Shi TH, Zhou SN. Open method versus capsulorrhaphy without drainage in the treatment of children with hepatic hydatid disease. *Br J Surg* 1992; 79: 1184-86.
8. Bryan K, Chen RA, Kang J, David E, Lopez T. Symptomatic post-traumatic cyst of the liver: Treatment by Laparoscopic Surgery. *Jr Lap-endo & Advanced Surg Tech* 2001; 11(1): 41-42.

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