

Case Report

Laparoscopic de-roofing of liver cyst with biliary communication, success or failure: case report

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ABSTRACT

A 39 year old gentleman complained of right upper abdominal pain. Ultrasonography revealed cholelithiasis with a cystic space occupying lesion in liver of around 14 cm. Computed tomography of whole abdomen was done which revealed a cystic lesion of 14.1×10.6×12.4 cm dimensions in right lobe of liver suggestive of simple cyst. Laparoscopic cholecystectomy was done along with de-roofing of cyst wall, bile leak was noted from a tiny orifice which was found communicating with biliary system by intraoperative cholangiography. Primary closure of opening done by suturing laparoscopically. Patient did well postoperatively and followed for 2 years with no complications and/or recurrence.

Keywords: Cholelithiasis, Laparoscopic cholecystectomy, De-roofing, Intraoperative cholangiography

INTRODUCTION

Hepatic cysts are most common hepatic lesions.¹ Developmentally they are thought to be of biliary origin i.e. hamartoma of biliary tree.² Majority of cysts are asymptomatic and are incidentally detected.³ Controversies exist between the different treatment modalities for liver cyst. Here laparoscopic de-roofing is considered as the treatment option for liver cyst which is also controversial especially when it has biliary communication which is generally not diagnosed pre-operatively. Limitation of this procedure is recurrence if located in segment 7 and 8 due to their location. Haemorrhage and biliary injury are rare but possible complications.⁴

Here, we have a case where successful treatment was done laparoscopically by de-roofing and primary suturing.

CASE REPORT

A 39 year old gentleman presented in the surgical outpatient department (OPD) with complaints of right

upper abdominal pain for past 2 years. Ultrasonogram of whole abdomen was done which revealed gall stones as well as a cystic space occupying lesion in right lobe of liver about 14 cm. Computed tomography was done which revealed (Figure 1) cystic lesion of 14.1×10.6×12.4 cm dimensions in right lobe of liver suggestive of simple cyst. Blood investigations were within normal range. Patient was planned for laparoscopic cholecystectomy. Intra-operatively it was found that there were mild adhesions at Calot's triangle with posterior wall of gall bladder adhered to cyst wall (Figure 2). Cystic de-roofing was done using laparoscopic coagulating shears (harmonic scalpel) and clear fluid came out without any tinge of bile. However later on examining the cyst cavity with laparoscope and bile leak was noted from a tiny orifice (Figure 3) whose communication with the biliary tract was confirmed by intraoperative cholangiogram. The orifice was closed by interrupted stitch taken laparoscopically. Total time duration of surgery is 3 hours and blood loss was approximately 300 ml. Histopathology of the cyst was consistent with simple liver cyst and gall bladder was chronic cholelithiasis without any evidence of malignancy. Post-operative recovery of patient was uneventful and on

follow up of 2 years there were no complications and/or recurrences.

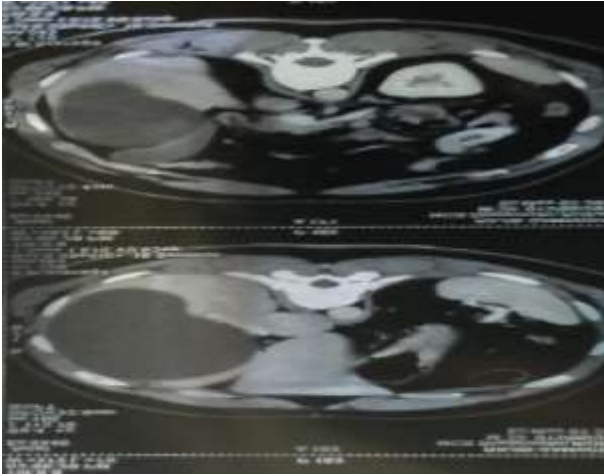


Figure 1: CT scan revealed cystic lesion of 14.1×10.6×12.4 cm dimensions in right lobe of liver.



Figure 2: Posterior wall of gall bladder adhered to cyst wall.



Figure 3: Bile leak was noted from a tiny orifice (marked by arrow).

DISCUSSION

Solitary non parasitic cysts i.e. simple cysts are found in about 5% of population with more commonly seen in females. Only 10-15% are symptomatic.^{5,6}

Various treatment options are available for simple cyst of liver - observation, percutaneous aspiration, injection sclerotherapy, cystic de-roofing, cytoenteric bypass, liver resections.^{7,8} Currently laparoscopic de-roofing is the standard treatment for simple liver cysts, however contraindication to de-roofing is cysto-biliary communication for which cysto enteric bypass is considered.⁷ Despite of all the recent advances it is still not possible to diagnose the communication preoperatively. Even endoscopic retrograde cholangiopancreatography (ERCP) that was supposed to be the diagnostic modality for this could not diagnose it pre-operatively due to high intracystic pressure.

In our case we could identify the opening only after careful intracystic examination with laparoscope, which is quiet sensitive modality. Also the communication was well established by performing intraoperative cholangiogram. This opening once recognized during laparoscopic procedure can be closed at the same time.

CONCLUSION

From the above case report we recommend laparoscopic cystic de-roofing for simple liver cyst even when it was found to be communicating with the biliary system.

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Ethical approval: Not required

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