

Sinistroposition of Gallbladder

U Khan¹, PE Coyne², E Fairclough² and R Farrell²

¹University Hospital of North Durham, North Road, Durham, County Durham. DH1 5TW.

²Department of Surgery, Queen Elizabeth Hospital, Gateshead.

Corresponding Author: Usman Khan.

Email: usman.khan@cddft.nhs.uk

Introduction

Isolated sinistroposition of the gallbladder is a rare anatomical anomaly and is often detected only at the time of operation as it can present with the same symptoms as a normally positioned gallbladder. Selective use of intra-operative cholangiography may be helpful in such cases. We report an incidental case of true “left sided gallbladder” (LSG).

Case Report

A 45-year-old gentleman presented with a 2–3 year history of intermittent postprandial epigastric pain, without radiation. On examination he was tender over the epigastrium and right hypochondrium; no mass was palpable. He had recently undergone oesophago-duodenoscopy (with normal results), and ultrasound examination showed a contracted gallbladder with gallstones. He proceeded to laparoscopic cholecystectomy.

At laparoscopy, the gall bladder was found on the left of a normally-positioned falciform ligament, overlying segments III and IV of the left lobe of liver (Figure 1). Both the cystic duct and artery were easily identified and ligated and the operation was completed without complications. Postoperative recovery was uneventful and the patient was sent home on the following day. At out-patient review he had no complaints and he was discharged.

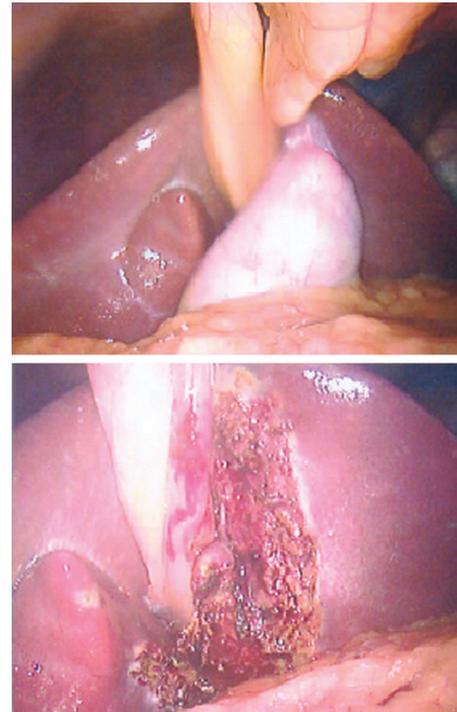


Figure 1: Left sided Gall Bladder discovered at operation

Discussion

Isolated sinistroposition of the gall bladder, that is a left sided gall bladder found without situs inversus, is a rare abnormality with a reported incidence of 0.04–0.3 percent.^{1,2} Routine pre-operative imaging by ultrasonography may not detect it.

The gall bladder is normally located on the visceral surface of the liver, in line with the middle hepatic vein and between the right anterior and left medial segments. “Aberrant gallbladders” are classified as intra-hepatic, left-sided, transverse or retrodisplaced. LSG without situs inversus is a rare finding, due

to migration of the gallbladder under the left lobe of liver to the left of a normally placed falciform ligament with a normal cystic duct. During gestation, LSG may also be caused by development of the gallbladder from a left-sided hepatic duct,³ or by a right-sided falciform ligament.⁴ In sinistroposition, the cystic artery crosses in front of the common bile duct from right to left, opening on the left or right side of common hepatic duct. The surgical approach must be modified in such cases.²

Safe laparoscopic resection is possible, although a different siting of ports is required. In our case, the ports were placed in the umbilical, epigastric and right subcostal areas. When the abnormality was detected, the fourth port was placed in a right paramedian position (instead of the right iliac fossa) and the epigastric port was moved to the midline. The operation proceeded as normal, and no complications were encountered.

Clinical symptoms and signs are often not helpful in distinguishing between normal and anatomically variant gallbladders as the pain is usually experienced in the right hypochondrium. Idu et al. report 6 patients, all of whom experienced pain in the right upper quadrant: the abnormality was discovered incidentally at surgery in all cases except one². Selective use of intra-operative cholangiography may be helpful in such situations^{5,6}. A proper awareness of the anatomy and modification of the surgical technique will almost always result in a safe operation.

References

1. Rozsos I, Ferenczy J, Vincze K, Rainer S. [Left-sided gallbladder.] *Magy Seb* 2002;55(5):329–30.
2. Idu M, Jakimowicz J, Iuppa A, Cuschieri A, Hepatobiliary anatomy in patients with transposition of the gallbladder: implications for safe laparoscopic cholecystectomy. *Br J Surg* 1996;83(10):1442–3.
3. Nagai M, Kubota K, Kawasaki S, Takayama T, Bandai Y, Makuuchi M, Are left-sided gallbladders really located on the left side? *Ann Surg* 1997;225(3):274–80.
4. Fujita N, Shirai Y, Kawaguchi H, Tsukada K, Hatakeyama H, Left-sided gallbladder on the basis of a right-sided round ligament. *Hepatogastroenterol* 1998;45(23):1482–4.
5. Gui D, Magalini S, Prete F, Sermoneta D, What's right when the gallbladder's left? A case report. *Surg Endosc* 2002;16(11):1637.
6. Reddy PK, Subramanian RV, Yuvaraj S. Laparoscopic cholecystectomy for left-sided gallbladder (sinistroposition). *JLS* 2005;9(3):356–7.