Laparoscopic cholecystectomy for a patient with a double gallbladder

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DESCRIPTION

A 43-year-old woman was referred with a 5-day history of epigastric and right upper quadrant pain associated with nausea. The patient had tenderness in the right hypochondrium on the abdominal examination. She had no jaundice. The leucocyte count and liver function tests were normal, ultrasonography of the abdomen revealed a distended, thick wall gallbladder with multiple small gallstones and normal diameter of the common bile duct and normal pancreas. The patient underwent laparoscopic cholecystectomy the next day. Intraoperatively the patient was found to have a double gallbladder with a single cystic duct (figures 1 and 2). The operation was completed in the usual way (video 1) and the histopathological examination of the specimen revealed a double gallbladder with completely separated lumens and a single cystic duct (figure 3), both lumens filled with multiple small stones with features of an acute inflammation in the two bladders. The patient was discharged home 24 h later.

Double gallbladder is an unusual congenital biliary anomaly, occurring at the rate of 1/4000. Most cases are asymptomatic and may be missed. However, this anomaly may cause diagnostic and surgical problems in case of cholecystitis.1 Failure to detect the accessory gallbladder has been reported as resulting in repeated episodes of cholecystitis in the remaining gallbladder after cholecystectomy.2

The preoperative diagnosis of this anomaly is especially important to prevent possible surgical complications and repeated laparotomies. In recent years, gallbladder duplication has been detected easily by CT.3

Figure 1 Postoperative images of the specimen showing the double gallbladder, completely separated lumens with a single cystic duct.

Figure 2 Postoperative images of the specimen showing the double gallbladder, completely separated lumens with a single cystic duct.

Video 1 Operative video showing the double gallbladder.
A double cystic duct in association with a double gallbladder is an extremely rare variation. During laparoscopic cholecystectomy, if the surgeon suspects the presence of more than one cystic duct, then intraoperative cholangiography is highly recommended to define the anatomy clearly and to exclude the possibility of an accessory cystic duct which needs to be clipped or ligated to avoid postoperative leak, and to exclude the possibility of an injury to the bile ducts which might necessitate conversion into laparotomy to be assessed and dealt with accordingly.

Fortunately, in our case the double gallbladder was obviously associated with a single cystic duct, therefore intraoperative cholangiography was not required and the operation was completed as usual.

**Learning points**

- Gallbladder duplication is a rare congenital anomaly that is not associated with any specific symptoms.
- Gallbladder duplication may be easily missed with ultrasonography as in our case.
- Intraoperative identification of the accessory gallbladder is necessary to avoid recurrence of symptoms in the missed accessory gallbladder.
- Surgeons should be aware about the possibility of the presence of double cystic duct, in case of any doubt, intraoperative cholangiography should be used to better define the anatomy.

**Competing interests** None.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**REFERENCES**


Figure 3  Postoperative images of the specimen showing the double gallbladder, completely separated lumens with a single cystic duct.