CASE REPORT

Bilobed gallbladder: a rare congenital anomaly

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Accepted 31 January 2018

SUMMARY

Bilobed gallbladder is a rare form of duplication of gallbladder. Preoperative diagnosis is important to avoid peroperative complications; however, it is also a challenge as imaging reports are often confounding. A case of bilobed gallbladder managed successfully laparoscopically is presented.

BACKGROUND

This case is important because biliary anatomy can be very varied and any injury during surgery can lead to disastrous complications.

It is a rare presentation of this varied anatomy seen 1 in 4000 births.

CASE PRESENTATION

A 45-year-old woman presented with pain in right hypochondrium and epigastrium of 3 months' duration. Pain was sudden in onset, gradually progressive, colicky in nature, associated with nausea and relieved on medication. Abdominal examination revealed soft abdomen with tenderness in right hypochondrium and epigastrium on deep palpation.

INVESTIGATIONS

Laboratory investigations revealed normal haematological parameters. Baseline liver function tests were normal. Ultrasonography (USG) abdomen showed partially distended gallbladder with 3.3×2.1 cm-sized cystic lesion in neck of gallbladder with sludge within and reported a possibility of type 1 choledochal cyst. Magnetic resonance cholangiopancreatography (MRCP) was carried out to further evaluate suspected choledochal cyst and it was suggestive of 2.6×2.6×2.8 cm-sized cystic lesion with sludge which is noted in the medial part of the gallbladder fossa, superior to the gallbladder, abutting the undersurface of the right hepatic duct;

it appeared to communicate with the cystic duct, suggestive of duplicated gallbladder (figure 1).

DIFFERENTIAL DIAGNOSIS

1. Duplication of gallbladder
2. Choledochal cyst
3. Gallbladder diverticulum

TREATMENT

The patient was taken up for laparoscopic cholecystectomy. Intraoperatively it was found that distended gallbladder with another lobe of gallbladder lying superomedially to the body of gallbladder and abutting the right hepatic duct. The main lobe was found to open into a single cystic duct which was ligated and cut. Cystic artery was single, it was clipped and cut. Gallbladder was dissected off the liver bed. The cut section of the specimen revealed the presence of septum between the two lobes of gallbladder. The accessory lobe of the gallbladder was not communicating with any structures and contained only mucus (figure 2).

OUTCOME AND FOLLOW-UP

Procedure was uneventful. Postoperative patient was treated with standard intravenous antibiotics. Postoperative day 1 diet started, and the patient was discharged on postoperative day 2 in stable condition.

On follow-up, the patient was asymptomatic with no active complaints.

DISCUSSION

Duplication of the gallbladder has an incidence of approximately 1:4000 births.^{1 2} Duplication

Figure 1 Axial (A) and coronal (B) views of magnetic resonance cholangiopancreatography (MRCP) image showing duplicated gallbladder.

Figure 2 Postoperative image of specimen of duplicated gallbladder. (A) Main gallbladder. (B) Septum dividing the two. (C) Accessory gallbladder. (D) Cystic duct.

To cite: Kumar M, Adhikari D, Kumar V, et al. *BMJ Case Rep* Published Online First: [please include Day Month Year]. doi:10.1136/bcr-2017-222783

Figure 3 Classification of duplication of gallbladder based on their relation to cystic duct.

of gallbladder occurs when either the cystic primordium splits during the fifth to sixth weeks of embryogenesis to give a duplicate gallbladder or when there is extra budding of the biliary primordium to give rise to an accessory gallbladder.³ Classification of duplication of gallbladder is based on their relation to the cystic duct (figure 3).¹

Group 1

Vesica fellea divisa—bilobed gallbladder with a single cystic duct.

Group 2

Vesica fellea duplex—two separate gallbladders and cystic ducts.

In our case, gallbladder consisted of two separate lobes; the main lobe was drained by a single cystic duct. Both the lobes of the gallbladder shared a single cystic artery.

Differential diagnosis of duplication of gallbladder includes Phrygian cap, choledochal cyst, folded gallbladder, focal adenomatosis, gallbladder diverticulum and intraperitoneal fibrous bands. USG is the primary investigation in suspected pathology

Learning points

- ▶ To understand the biliary anatomy.
- ▶ To approach and identify all important biliary and vascular structures.
- ▶ To prevent any iatrogenic injury by following steps 1 and 2 listed above.

of the gallbladder; it fails to differentiate between the differential diagnoses of gallbladder listed above.^{4,5} We have the similar experience in our case where bilobed gallbladder has been reported as choledochal cyst on USG. Hence, better imaging techniques like MRCP should be done, which is now accepted as the investigation of choice for duplication of gallbladder.^{5,6}

Preoperative delineation of biliary anatomy is important to avoid risks of biliary and vascular injuries and associated complications. Simultaneous removal of both the lobes of the gallbladder is important to avoid postoperative gallstone formation and cholecystitis.^{2,7}

Duplication of gallbladder is a rare entity. Better understanding of the biliary anatomy in preoperative phase is essential for managing the patient by minimally invasive techniques like laparoscopic cholecystectomy and minimising the intraoperative complications. In spite of preoperative imaging like MRCP, managing duplicated gallbladder laparoscopically is a challenge due to the complex biliary anatomy.

Contributors MK has participated in writing the article, postoperative care and follow-up of patient and received informed consent from the patient. DA is responsible for the surgical care of the patient and participated in writing and revising the article. VK is responsible for the surgical care of the patient and participated in revising the article. SD is responsible for admitting the patient to the hospital and critically reviewed the article. DA and SD are the guarantors.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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