

Laparoscopic Cholecystectomy for Gallbladder Duplication

Rahul Gupta¹ · Piyush Verma¹ · Jitendra Yadav¹ · Arvind K. Singh¹ · Harsha Bhat² · Sudhir K. Singh²

Received: 28 July 2018 / Accepted: 7 August 2018 / Published online: 17 August 2018
© 2018 The Society for Surgery of the Alimentary Tract

Keywords Gallbladder · Cholecystectomy · Laparoscopy

Case Presentation

A 31-year-old lady presented with chief complaints of epigastric pain for 6 months. Clinical examination was unremarkable. Blood investigations were within normal limits. Ultrasonography reported distended gallbladder containing multiple well-defined, mobile calculi with normal wall thickness (Fig. 1). The gallbladder was suspected to be bilobed. Common bile duct was normal in calibre. Liver was normal in size, shape and parenchymal echogenicity with the presence of multiple small hemangiomas. Contrast-enhanced computed tomography reported the presence of bilobed gallbladder containing multiple calculi (Fig. 2). MRCP could not be performed due to claustrophobia.

Intraoperatively, there were dense adhesions between the gallbladder and omentum. After adhesiolysis, two gallbladders could be seen densely adhered to each other (Fig. 3). By slow and meticulous dissection, the two gallbladders were separated. There were two separate cystic ducts joining in V-shaped pattern and draining in to an aberrant duct. After obtaining critical view of safety, both the cystic ducts were separately clipped with Hem-o-lok and cholecystectomy was completed. Postoperative recovery was uneventful. Histopathological examination of both the gallbladders revealed chronic cholecystitis.

Discussion

Duplication of gallbladder is a rare congenital anomaly of extrahepatic biliary system observed in about 1/4000 births.¹ Traditionally, it has been classified by Boyden as vesical fellea divisa (double gallbladder with a common neck) and vesical fellea duplex (two gallbladders with separate cystic ducts).¹ The cystic ducts in vesica

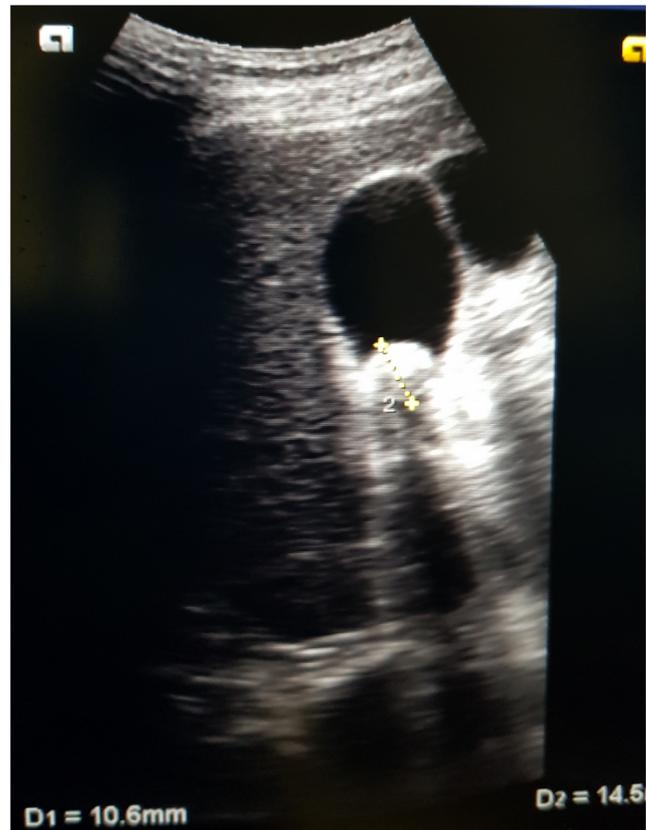


Fig. 1 Transabdominal ultrasound showing the distended gallbladder containing the gallstone with a communicating cystic lesion adjoining it

✉ Rahul Gupta
rahul.g.85@gmail.com

¹ Department of Gastrointestinal Sciences, Synergy Institute of Medical Sciences, Dehradun, Uttarakhand 248001, India

² Department of Anaesthesia, Synergy Institute of Medical Sciences, Dehradun, India



Fig. 2 Contrast enhanced computed tomography showing the gallbladder with the presence of radio-opaque stone in it. A cystic lesion was seen closely abutting the medial wall of the gallbladder

fellea duplex can have either Y-shaped or H-shaped configuration. In our case, it was vesical fellea duplex

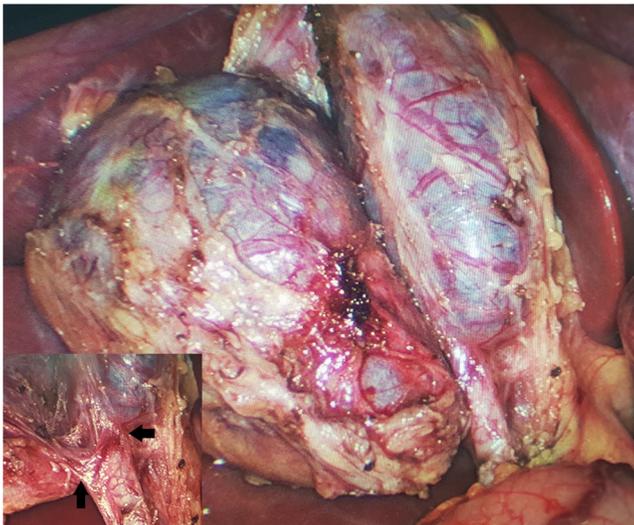


Fig. 3 Laparoscopic photograph showing the two separate gallbladders with two cystic ducts (black arrows)

with V-shaped configuration of cystic ducts. This anomaly has been found to be associated with other vascular and biliary anomalies predisposing them to iatrogenic injuries during laparoscopic cholecystectomy. Hence, detailed preoperative imaging studies should be performed if diagnosed preoperatively. If detected intraoperatively, slow and meticulous dissection should be performed to delineate the exact anatomy with low threshold for conversion to open surgery. Also, intraoperative cholangiogram may be performed if any altered biliary anatomy is suspected. In the present case, as the cystic ducts could be completely dissected and clipped, cholangiogram was not performed.

Author Contributions 1. Rahul Gupta—Conception of the work, drafting of manuscript, final approval and agreement for the accountability of work.

2. Piyush Verma—Data collection, drafting of manuscript, final approval and agreement for the accountability of work.

3. Jitendra Yadav—Data acquisition, revising of the manuscript, final approval and agreement for the accountability of work.

4. Arvind K Singh—Data interpretation, editing of the manuscript, final approval and agreement for the accountability of work.

5. Harsha Bhat—Data collection, revising of the manuscript, final approval and agreement for the accountability of work.

6. Sudhir K Singh—Conception of the work, revising of the manuscript, final approval and agreement for the accountability of work.

Compliance with Ethical Standards

Informed Consent The patient provided informed written consent prior to submission of this manuscript.

Conflict of Interest The authors declare that they no conflict of interest.

Reference

1. Boyden EA. The accessory gallbladder—an embryological and comparative study of aberrant biliary vesicles occurring in man and the domestic mammals. *Am J Anat* 1926;38:177–231.