Gallbladder agenesis

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ABSTRACT

This case report describes unusual congenital biliary anatomy encountered at a routine laparoscopic cholecystectomy. Imaging obtained prior to surgery (ultrasonography and magnetic resonance cholangiopancreatography) had been misleading. The case highlights the importance of careful dissection even with anticipated normal anatomy.

KEYWORDS

Gallbladder – Agenesis

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Case History

The intraoperative photograph in Figure 1 was taken during a planned laparoscopic cholecystectomy at our institution. The patient presented to us with intermittent episodic right upper quadrant pain. There was no history of jaundice and liver function tests were unremarkable. Ultrasonography was reported as showing gallstones in a shrunken gallbladder and a 13mm common bile duct with no obvious choledocholithiasis. Magnetic resonance cholangiopancreatography was reported as showing the same gallbladder findings as the ultrasonography with a 13mm common bile duct tapering smoothly to the ampulla with no evidence of intraductal calculi.

As with all cases of uncertain anatomy, dissection should proceed carefully before division of any structures. Intraoperative cholangiography or conversion to an open operation would be options. However, we felt we could not improve on the anatomical delineation achieved after careful dissection. Repeat imaging confirmed that there was no gallbladder in the abdomen and the initial imaging had been reported incorrectly.

Discussion

Agenesis of the gallbladder is a rare finding with an estimated prevalence of 0.04% based on a postmortem study.¹ Around 400 cases have been reported; in around 13% this is associated with other anomalies such as skeletal or cardiac anomalies.² While gallbladder agenesis has been reported with distant anomalies frequently, reports of associated local anomalies such as portal abnormalities and absence of the right lobe are more unusual.^{3,4} To our knowledge, this is the first case of gallbladder agenesis with associated idiopathic biliary dilation.

The common theme emerging from many of the case reports is the diagnostic difficulty in the preoperative phase. This is likely to be due to the overall infrequency of the condition and consequent low index of suspicion for agenesis when interpreting imaging findings, together with the fact that around 50% of reported cases appear to be associated with symptomatic presentations similar to biliary colic.²

Conclusions

Surgeons performing laparoscopic cholecystectomy should be aware of this potential congenital anomaly to prevent iatrogenic injuries from overzealous dissection when unexpected findings occur at laparoscopy, even in the face of apparently definitive preoperative imaging.

Figure 1 Biliary anatomy after dissection

References

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