Ectopic gallbladder revisited, laparoscopically: a case report

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A case of the rare congenital anomaly ectopic gallbladder is presented. A 16-year-old girl suffered attacks of epigastric pain unrelated to eating. On abdominal ultrasonography, the gallbladder could not be found in its usual position. Endoscopic retrograde cholangiography demonstrated the gallbladder on the left side of the common duct and the cystic duct arising from the right hepatic duct. Laparoscopic cholecystectomy was done without complication. This appears to be the first reported case of laparoscopic removal of an ectopic gallbladder. The importance of preoperative cholangiography is emphasized for accurate diagnosis and preoperative location of the gallbladder.

On présente un cas de vésicule biliaire ectopique, anomalie congénitale rare. Une jeune fille de 16 ans avait subi des crises de douleurs épigastriques non liées aux repas. Une échographie abdominale n'a pu indiquer que la vésicule biliaire se trouvait à l'endroit normal. Une cholangiopancréatographie rétrograde endoscopique a démontré que la vésicule biliaire se trouvait du côté gauche du canal cholédoque et que le canal cystique émanait du canal hépatique droit. On a procédé à une cholécystectomie par laparoscopie sans complication. Il semble s'agir du premier cas signalé d'ablation par laparoscopie d'une vésicule biliaire ectopique. On insiste sur l'importance d'une cholangiopancréatographie préopératoire pour poser un diagnostic exact et localiser la vésicule biliaire avant l'intervention.

Ectopic gallbladder is a rare congenital anomaly. We report the first case of laparoscopic cholecystectomy done for an ectopic gallbladder.

Case report

An otherwise healthy 16-year-old girl complained of recurrent attacks of epigastric pain for 1 month. The pain was not related to eating. Two days before admission the pain worsened and became constant.

There was tenderness in the epigastrium and she had a low-grade fever. The leukocyte count, serum amylase level and results of liver function tests were unremarkable. Abdominal ultrasonography, however, revealed that the gallbladder was not in its usual position. Instead, a globular, cystic structure, presumably the gallbladder, was found attached to the left hepatic lobe, joining the common bile duct at the suprapancreatic level. There were no gallstones or definite ultrasonographic features of acute cholecystitis. The common bile duct and intrahepatic ducts were normal.

The patient's symptoms resolved with conservative treatment. However, because of the suspected gallbladder ectopia, endoscopic retrograde cholangiography (ERC) was done. It demonstrated that the gallbladder was situated on the left side of the common duct and the cystic duct arose from the right hepatic duct (Fig. 1).

The gallbladder anomaly was considered to be the cause of the patient's epigastric pain, so laparoscopic cholecystectomy was carried out. Laparoscopy clearly showed the gallbladder on the left side of the falciform ligament, attached to the left lateral segment of the liver. The gallbladder wall was mildly thickened and omental adhesions were present, suggesting chronic inflammation.

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Accepted for publication July 8, 1996

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For the laparoscopic cholecystectomy, a modified 4-port technique was used: a subumbilical port for the telescope, an epigastric port for cephalad gallbladder retraction and 2 ports in the left and right upper quadrants for dissection. The gallbladder was removed through the subumbilical port.

Pathological examination of the excised specimen showed focal serosal thickening and mild chronic inflammation; no gallstones were found.

The girl's recovery was uncomplicated and she was discharged from the hospital 2 days postoperatively. At follow-up 6 weeks later she was asymptomatic.

Discussion

Ectopic gallbladder locations such as intrahepatic, left-sided within the lesser omentum, within the falciform ligament, retrohepatic, retroperitoneal, retroduodenal and retropancreatic have been described.[1] The commonest location is left sided beneath the left hepatic lobe as in our patient.[2] Retroplaced locations are the least common.[3]

There are no data to suggest that ectopic gallbladder is associated with an increased incidence of cholelithiasis. Similarly, there is no evidence to suggest that it is associated with an increased risk of torsion, though perhaps this is a reflection of the rarity of torsion and ectopia of the gallbladder. In our patient, the cystic duct entered the right hepatic duct instead of the common duct. However, this finding could be incidental; a review of previously reported cases of ectopic gallbladder[1–4] did not support the idea that gallbladder ectopia and other developmental anomalies of the biliary tract were associated in any way.

FIG. 1. Endoscopic retrograde cholangiography showing the left-sided gallbladder. Arrow points to the entry of the cystic duct into the right hepatic duct.

It is important for surgeons and radiologists to recognize ectopic gallbladder. In our case, the left-sided gallbladder gave rise to epigastric pain rather than right upper quadrant pain. Fortunately, the diagnosis of an ectopic gallbladder was first suggested by ultrasonography, which revealed a globular mass beneath the left hepatic lobe. The diagnosis can be much more difficult for ectopic gallbladder in other locations. Acute cholecystitis in a patient with a retroplaced gallbladder will present as right flank pain. One review of gallbladder ectopia[2] reported that retroplaced gallbladders were confused with liver or renal cysts.

Accurate localization of the gallbladder is manadatory to avoid misdiagnosis and to plan the surgical approach. Radionuclide scanning is a well-established, reliable technique for locating the ectopic gallbladder,[4] although in one report[5] it gave a false-positive result in a patient with a normally placed, right subhepatic gallbladder. Moreover, radionuclide scanning may not show the ectopic gallbladder if it is obstructed or nonfunctioning. ERC as used in our case may be a better technique for diagnosis.

To our knowledge our case represents the first ectopic gallbladder successfully removed by the laparoscopic technique. Today, the widespread use of laparoscopic cholecystectomy suggests that this technique will be used increasingly to remove ectopic gallbladders. In the case of failure to discover an ectopic gallbladder at laparoscopy, without a preoperative diagnosis, the condition could easily be confused with gallbladder agenesis.[6] This situation is highly unlikely because failure to find the gallbladder

in its usual right subhepatic location with preoperative ultrasonography will provide a clue to the presence of this rare congenital anomaly. It is an overstatement to say that gallbladder ectopia is a strict contraindication to laparoscopic surgery, as is demonstrated by our case. The surgeon must locate the gallbladder accurately in each case before the operation, either by radionuclide scanning or ERC, and should anticipate modifications in the laparoscopic approach.

References

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4. Pradeep VM, Ramachandran K, Sasidnaran K. Anomalous position of the gallbladder: ultrasonographic and scintigraphic demonstration in four cases. *J Clin Ultrasound* 1992;20: 593-7.
5. Bourekas EC, Tupler RH, Turbiner EH. Morphine-augmented cholescintigraphy with a false-negative result and an apparent ectopic gallbladder [published erratum appears in *Clin Nucl Med* 1993;18:443]. *Clin Nucl Med* 1992;17:931-2.
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Notices
Avis

Interactive surgical symposium

The Mayo Clinic Scottsdale is sponsoring the Mayo Interactive Surgical Symposium, to be held at the Marriott's Camelback Inn Resort, Golf Club and Spa, Scottsdale, Ariz., from Feb. 12 to 14, 1998. The course directors are Drs. John Donohue and William Stone. The symposium will comprise interactive sessions designed to update the general surgeon on state-of-the-art issues in breast surgery, trauma and critical care, endocrine, gastrointestinal/hepatobiliary, and vascular and thoracic surgery. For information regarding CME credits, registration and fees contact: Sara Schnirring, Medical Education Office, Mayo Clinic Scottsdale, 13400 East Shea Blvd., Scottsdale AZ 85259, USA; tel 602 301-7552; fax 602 301-8323.

Colorectal disease in 1998

The Department of Colorectal Surgery, Cleveland Clinic Florida will present the 9th annual symposium entitled "Colorectal Disease in 1998. An International Exchange of Medical and Surgical Concepts." The symposium will be held at the Marriott's Harbor Beach Resort, Fort Lauderdale, Fla., from Feb. 19 to 21, 1998 under the direction of Dr. Steven D. Wexner. Simultaneous translation will be available in Spanish and Italian. Credits: 24.5 hours in Category I of the AMA Physicians' Recognition Award or may be substituted for AOE-CME Category II-A. Contact: Cleveland Clinic Florida, Department of Education, 2950 West Cypress Creek Rd., Fort Lauderdale FL 33309-1743, USA; tel 954 978-5056; fax 954 978-5539; jagels@cesmtp.ccf.org

Urogynecology and disorders of the female pelvic floor

The 7th annual course on urogynecology and disorders of the female pelvic floor, sponsored by the Mayo Clinic Scottsdale, will be held from Mar. 26 to 28, 1998, at the Marriott's Camelback Inn, Scottsdale, Ariz. The course director will be Dr. J.L. Cornella. Contact: Sara Schnirring, CME Department, Mayo Clinic Scottsdale, 13400 East Shea Blvd., Scottsdale AZ 85259, USA; tel 602 301-4661; fax 602 301-8323.

Pediatric orthopedic review course

The 11th Sainte-Justine Pediatric Orthopedic Review Course (SPORC 1998), sponsored by the Université de Montréal and the Canadian Orthopaedic Association, will be held from Apr. 15 to 18, 1998, at the Complexe Desjardins Hotel, Montreal. For further information contact: Dr. Thierry Benaroch, Secretary, SPORC '98, Hôpital Sainte-Justine, 3175, Côte Sainte-Catherine, Montréal (Québec) H3T 1C5; tel 514 345-4876; fax 514 345-4755.

Third biennial foot and ankle symposium

The third biennial foot and ankle symposium, sponsored by the Canadian Orthopaedic Association and the Department of Surgery, University of Toronto, will be held from Apr. 17 to 20, 1998, at the King Edward Hotel, 37 King St. E, Toronto. The symposium will focus on the assessment and treatment of foot disorders in adults and children. Topics will include conservative and surgical management and will emphasize audience participation. Speakers include: Drs. I. Alexander, A. Amendola, R. Claridge, J. Corless, E. English, S. Hansen, T.R. Daniels and G. Hunter. Credits: MOCOMP, Type II and AMA Category I. For further information contact: Continuing Education, Faculty of Medicine, University of Toronto, 150 College St., Room 121, Toronto ON; tel 416 978-2719; fax 416 971-2200.