Case reports of interest

Gallbladder lymphangioma: a case report and review of the literature

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Abstract
Lymphangiomas are benign neoplasms usually occurring in childhood and located in the head and neck. Intraabdominal lymphangiomas account for less than 5% of cases. The involvement of the gallbladder is rare. We report a case of a 29-year-old woman who presented with right upper quadrant pain that had persisted for 6 months. Imaging with ultrasound and magnetic resonance imaging (MRI) revealed a multiseptated lesion surrounding the gallbladder. The patient underwent an exploratory laparotomy, and the mass was resected en bloc with the gallbladder. Histological evaluation of the cystic mass revealed findings consistent with lymphangioma. The prognosis is generally good after complete surgical excision, as was the case for our patient.

Key words Gallbladder · Lymphangioma · MRI

Case report

A 29-year-old female presented with a 6-month history of nausea, vomiting, and right upper quadrant abdominal pain radiating to the back. Symptoms were precipitated by fatty meals and alcohol. She denied episodes of heartburn, jaundice, or pancreatitis. She was empirically tried on a proton pump inhibitor without success. Additionally, she had recently undergone an evaluation for infertility, including a hysterosalphingogram. The evaluation did not reveal a cause for the infertility. Aside from these issues, the patient was healthy without prior abdominal surgeries.

A physical examination was unremarkable with the exception of mild tenderness to deep palpation in the right upper quadrant of the abdomen. Laboratories studies, including complete blood count, electrolytes, and liver function tests, were normal.

To further evaluate these symptoms, an abdominal ultrasound was obtained. This revealed a multiseptated hypoechoic lesion surrounding the gallbladder (Fig. 1). Subsequent magnetic resonance imaging (MRI) and magnetic resonance cholangiopancreatography (MRCP) (Figs. 2–5) showed an amorphous structure of fluid attenuation engulfing the gallbladder and extending into the liver hilum around the cystic duct and hepatic artery. The lesion was traversed by filamentous, poorly enhancing septations. The administration of an MR biliary agent (mangafodipir trisodium) confirmed that the bile ducts were intact and ruled out a bile leak. The gallbladder itself appeared normal without stones or mucosal mass. There was no intra- or extrahepatic duct dilation. Endoscopic retrograde cholangiopancreatography obtained several days later was interpreted as normal without biliary abnormalities.

Following this imaging, the patient underwent an exploratory laparotomy. As the abdomen was explored, the gallbladder was found to be encased by the cystic mass. The cystic mass extended medially to adhere to the entire extrahepatic bile duct anteriorly and posteriorly from the hepatic bifurcation to the level of the head of the pancreas. Part of the cyst adhered to the right hepatic artery as the artery passed beneath the common bile duct. The cystic mass lay anterior to the inferior vena cava without adhering to the cava. The distal common bile duct was divided just cephalad to the head of pancreas. The dissection was carried cephalad and the bile duct was divided 4 mm beneath the bile duct bifurcation without leaving any cystic structure behind. Posteriorly, the cystic mass was successfully peeled off the right hepatic artery. The gallbladder was removed en bloc with the extrahepatic bile duct. Both proximal and distal bile duct margins were histologically normal. A Roux-en-Y choledochojejunostomy was reconstructed.

A histological evaluation of the cystic mass revealed findings consistent with lymphangioma (Fig. 6). The gallbladder was otherwise benign. It appeared that the
Fig. 1. Longitudinal ultrasound image of the gallbladder. The fluid filled gallbladder (GB) is surrounded by a multiseptated mass (arrows), an appearance suggesting an abnormality either arising from, or intimately associated with, the gallbladder wall. The gallbladder mucosa appears intact.

Fig. 2. Projectional coronal magnetic resonance cholangiopancreatography (MRCP) image. The gallbladder (GB) is encased by a well-circumscribed cystic mass (arrowheads). The normal-appearing bile duct (arrows) is slightly displaced.

Fig. 3. Coronal, fat-suppressed T2-weighted magnetic resonance imaging (MRI) image. The gallbladder (GB) and cystic duct (arrow) are encased. The shape of the cystic structure is molded by the adjacent structures. D, fluid-filled duodenum; L, liver.

Fig. 4. Axial T1-weighted image obtained following the administration of both gadolinium and a biliary agent (mangafodipir trisodium) at the level of the liver hilum. The opacified right and left hepatic ducts (arrow) are splayed by the low-signal-intensity mass.