Not Just Testicles and Ovaries: A Case Report of Gallbladder Torsion

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Background

Gallbladder torsion is a rare pathological entity causing acalculous cholecystitis. More common in elderly women, it is an important diagnosis to include in the differential for right upper quadrant pain. We describe intra-operative diagnosis of gallbladder torsion as the etiology of gangrenous cholecystitis and bilious peritonitis.

Figure 1

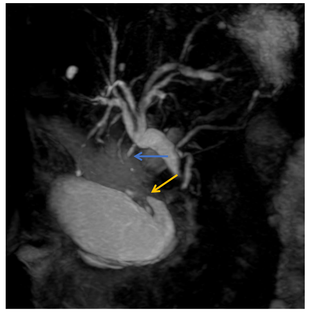


Grayscale ultrasound image. Distended gallbladder with marked wall thickening. No cholelithiasis.

Figures 2 and 3

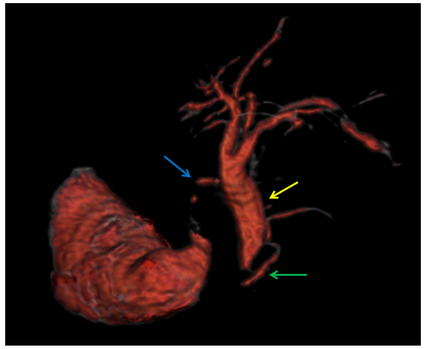


Axial contrast enhanced CT. Severely distended gallbladder with marked wall thickening and hypoenhancement of gallbladder wall.



Rotated 3D MRCP image. Shows dilated gallbladder. There is abrupt tapering of gallbladder neck and cystic duct.

Figure 4



3D volume rendered image of gallbladder, biliary tree and pancreatic duct. cystic duct (blue), common bile duct (yellow), pancreatic duct (green)

Case Report

A 91-year-old woman with a history of appendectomy and right hemicolectomy presented with two days of right-sided abdominal pain. Physical examination revealed positive Murphy's sign as well as tenderness in the right lower quadrant. Laboratory studies revealed a leukocytosis of 22,000, bandemia of 19%, lactic acid of 2.1, total bilirubin of 1.1, normal aspartate transaminase and alanine transaminase levels. Initial computed tomography demonstrated a distended and thick-walled gallbladder with intra- and extra-hepatic biliary ductal dilatation suggestive of acute cholecystitis without clear evidence of perforated or gangrenous cholecystitis. Ultrasound revealed a gallbladder wall thickness of 0.80 cm, common bile duct diameter of 1.2 cm, and no cholelithiasis. Magnetic retrograde cholangiopancreatography (MRCP), which was performed to evaluate for presence of a mass or stone causing ductal obstruction, again demonstrated a distended and thick-walled gallbladder with surrounding edema but did not reveal a mass or stone.

Intravenous antibiotics and crystalloid resuscitation were initiated. The patient was taken to the operating room for laparoscopic cholecystectomy. Intra-operatively, there was purulent bilious ascites, adhesions from the gallbladder to the omentum and hepatic flexure of the colon, and patchy necrosis of the gallbladder. The gallbladder appeared rotated 180˚ counterclockwise with the infundibulum positioned anterosuperior and the fundus posteriorly, so the gallbladder was rotated clockwise. There were minimal attachments from the gallbladder to the cystic plate and a pendulous cystic mesentery. The cholecystectomy was performed without complication. The pathology report revealed transmural necrosis and no malignancy. The patient was discharged postoperative day 7 to a skilled nursing facility.

Conclusions

The case described demonstrates the insidious presentation of acute acalculous cholecystitis from gallbladder torsion as well as the risk for gangrenous cholecystitis and gallbladder perforation. Despite improvement in imaging technology, it is often a diagnosis made intra-operatively. It should remain on the differential diagnosis for etiologies of acute acalculous cholecystitis, particularly in elderly women.

Acknowledgements

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