Duplicated Gallbladder
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History
13 year old female presenting with abdominal pain and emesis for 2 months. CT, ultrasound and labs from outside hospital suggested gall bladder etiology.

Diagnosis
Duplicated gallbladders with acute and chronic cholecystitis.

Additional Clinical
Surgery was performed which confirmed above diagnosis.

Discussion
The incidence of gallbladder duplication is extremely rare, occurring in approximately 1 of every 4,000 births in an autopsy series (1). It has been found to be associated with complications such as cholecystitis (such as was seen in this case) and cholelithiasis. In multiple gallbladder anatomy, each gallbladder must have valves at the neck, a tunica muscularis, and the ability to concentrate bile. While ultrasound is usually the initial imaging modality for biliary disease, locating the cystic ducts can be quite difficult and trying to determine a bilobed gall bladder from a duplicated gall bladder nearly impossible(2). MRCP proves to be a noninvasive technique as well as key in determining the anatomy for preoperative planning and to avoid biliary injury. Simultaneous removal of both gallbladders at laparoscopic surgery is recommended to avoid cholecystitis and symptomatic gallstones in the remaining organ (that was done in this case).

Anatomic variants of gall bladder duplication are most commonly classified according to the Harlaftis classification which is divided into 2 main groups based upon embryogenesis(3). Type 1, or split primordial group, is subdivided into septated, V shaped, or Y shaped and occurs when there is a single cystic duct and a septum that divides the 2 gallbladders. Type 2 describes accessory gallbladders that are ductular or trabecular, meaning that they arise from separate primordium from the biliary tree and have individual cystic ducts like in this case.

Findings
MRCP: Coronal images demonstrate two gall bladders associated with separate cystic ducts, no clear communication between them is identified. Anterior gallbladder with associated findings of suggestive of hemorrhage (hyperintense T1 signal and hypointense T2 signal). Post contrast images demonstrate thickened and irregular enhancement of the anterior gall bladder.
CT: Two cystic structures in the gallbladder fossa with a small duct associated with each one. Mild enhancement of the liver parenchyma around the gallbladder fossa and edema in the gallbladder fossa compatible with inflammation.
US: Two cystic structures adjacent to each other in the gallbladder fossa with evidence of inflammation (wall thickening).

Reference
1. Boyden EA. The accessory gall-bladder—an embryological and comparative study of aberrant
3. Marlin Wayne Causey, Seth Miller, Colby A. Fernelius, Jeanette R. Burgess, Tommy A. Brown,
Christopher Newton, Gallbladder duplication: evaluation, treatment, and classification, Journal of
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