

## An unusual cause of abdominal pain

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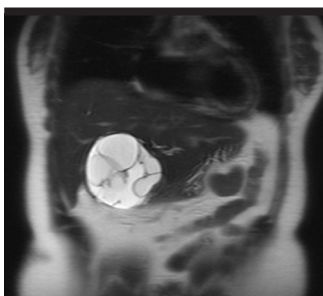
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### QUESTION

A 30-year-old woman presented with a history of abdominal pain of 2-month duration associated with intermittent non-bilious vomiting. She also had a history of intermittent fever associated with chills and complained of heaviness in the chest. Clinical examination was unremarkable and on routine investigation, she was found to have a white cell count of 13,300 cells/mm<sup>3</sup> with normal hemoglobin and platelet count. Her renal and liver parameters were normal. She underwent an ultrasound of the abdomen which showed a 7.4×6.7×6.4 cm large, multiloculated, complex cystic lesion in right lobe of the liver in segments IVa, IVb, and VIII. The common bile duct (CBD) was prominent, and mild intrahepatic biliary radicle dilatation (IHBRD) was noted. The patient underwent a computed tomographic scan of the abdomen which showed well-defined exophytic hepatic cystic lesion with thin membranes associated with small collection along the inferior aspect of the lesion with loss of fat planes and the lesion causing a mass effect on CBD, gallbladder with

mild dilatation of CBD. The patient had been started on tab albendazole 400 mg per day for 21 days; however, her symptoms were not relieved, and she developed jaundice with raised alkaline phosphatase and gamma glutamyl transferase. To delineate the hepatobiliary ducts, magnetic resonance cholangiopancreatography was done. It showed a large multiseptated cyst (Figure 1) with a mass effect on the pancreas and gallbladder. A multiloculated cystic lesion was seen in the proximal and mid CBD causing a narrowing with resultant IHBRD. The patient underwent endoscopic retrograde cholangiopancreatography (Figure 2) which showed a large filling defect in the mid CBD which could not be removed. Spyglass cholangioscopy (Figure 3) was performed which revealed a large polypoidal lesion with a stalk and abnormal surface vessels. Using SpyBite, multiple biopsies were taken and sent for histopathology examination (Figure 4).

What is the most likely cause of the cystic lesion of liver?



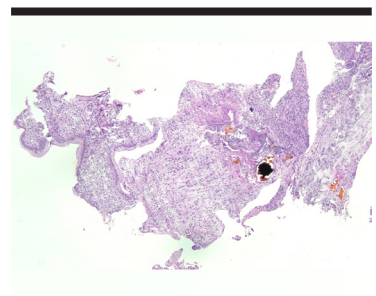
**Figure 1.** Magnetic resonance cholangiopancreatography showing a large multiseptate cyst.



**Figure 2.** Endoscopic retrograde cholangiopancreatography showing a large filling defect in the mid common bile duct.



**Figure 3.** Spyglass cholangioscopy revealing a large polypoidal lesion with a stalk.



**Figure 4.** Histopathology examination reveals tumorous lesion as biliary cystadenoma.

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**ANSWER**

**Figure 4** - The patient's tumorous lesion was identified as biliary cystadenoma

Histopathology examination revealed a single layered, mucinous columnar epithelium of the lesion which expressed CA 19-9 and CEA, with a positive diagnosis for biliary cystadenoma (BCA). The patient was advised to undergo surgical resection of the tumor. BCA are commonly seen in women (90%) with a mean age of 45 years. Patients are often asymptomatic but can present with non-specific symptoms, including abdominal pain and distention (1). They can have normal laboratory values with about 20% of the patients having an elevated level of total bilirubin. Cholangitis and obstructive jaundice are rarely seen and are associated with extrahepatic biliary cystic tumors. CT scan and MRI, along with histopathological features, help in the differentiation of other cystic tumors. Morphologically, they can have calcifications and dense fibrosis. They reveal a pure biliary immunophenotype with a single layer of columnar-to-cuboidal epithelium backed by fibrous connective tissue. Differential diagnosis for cystic lesions of the liver includes hydatid cyst, liver abscess, hemorrhagic cyst, post-traumatic cyst, embryonal sarcoma, polycystic disease, primary or metastatic necrotic neoplasm, biliary intraductal papillary mucinous neoplasm, and atypical simple cyst (2).

The treatment includes surgical resection with negative margins. Surgical therapies recommended are liver resection or enucleation based on the anatomic position of the cyst (3).

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