Duodenal duplication cyst in a 61-year-old man

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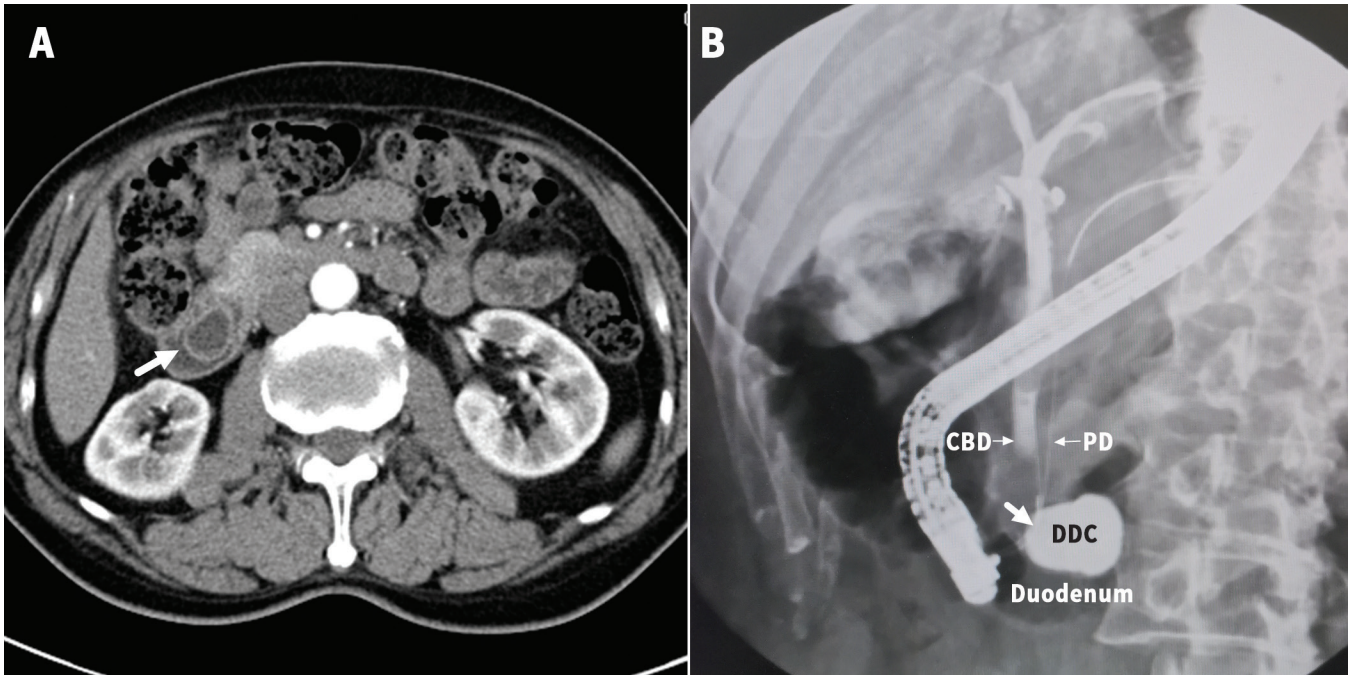

Figure 1: (A) A contrast-enhanced computed tomography scan of the abdomen of a 61-year-old man, showing a cystic mass (2.3 × 1.6 × 4.0 cm) at the second part of the duodenum (white arrow). (B) An endoscopic retrograde cholangiopancreatography examination showed that the pancreatic duct and common bile duct were confluent in the cyst. The bold white arrow shows the ampulla of Vater. The thin white arrows show the CBD and PD, respectively. Note: CBD = common bile duct, DDC = duodenal duplication cyst, PD = pancreatic duct.

A 61-year-old man had acute pancreatitis 5 years previously. Computed tomography (CT) of the abdomen showed a cystic mass at the second part of the duodenum. Surgery was suggested, but the patient declined. Over the subsequent 5 years, he had 4 additional episodes of acute pancreatitis before presenting to our surgery clinic requesting curative treatment of the cystic mass. He was asymptomatic, and physical examination, complete blood count, liver enzyme levels and amylase and lipase levels were normal. A CT scan of the abdomen in our centre showed that the mass had not changed (Figure 1A). Endoscopic ultrasonography showed an anechoic lesion with a 5-layer wall (Appendix 1, available at www.cmaj.ca/lookup/doi/10.1503/cmaj.221387/tab-related-content) and endoscopic retrograde cholangiopancreatography showed that the pancreatic and bile ducts were confluent in the cyst (Figure 1B and Appendix 1, Figure B). Tests of the patient's cystic fluid showed amylase levels above 10 000 IU/L, lipase levels above 1500 U/L, total bilirubin 83.3 µmol/L and total bile acid 2212.06 µmol/L. These results were all much higher than normal values in plasma and suggested to us that the bile and pancreatic secretions drained into the cyst, and that the cyst was likely the cause of the patient's recurrent pancreatitis.

We endoscopically resected the lesion, and histopathology showed a duodenal duplication cyst (Appendix 1, Figure C). A repeat endoscopy after 3 months showed that the orifices of the bile duct and pancreatic duct were separate (Appendix 1, Figure D). The patient had no episodes of acute pancreatitis during 15 months of follow-up after resection.

A duodenal duplication cyst is a congenital malformation with an estimated prevalence of less than 1 per 100 000 live births[1] and is most commonly diagnosed in infancy and childhood. The most common complication is pancreatitis and the

main differential diagnosis is choledochocele. On histology, a duodenal duplication cyst is covered on both sides by duodenal mucosa with a distinct layer of smooth muscle in between, whereas a choledochocele is covered by either bile duct or gallbladder mucosa, with no smooth muscle layer.[2] During endoscopic ultrasonography, a duodenal duplication cyst appears anechoic with a wall of 3–5 layers. A specific finding is muscular peristalsis of the cyst wall, seen on duodenoscopy. Malignant transformation of duodenal duplication cysts has been reported, but is uncommon.[3] The optimal treatment is complete resection; endoscopic treatment is less invasive than surgery but patients recover more quickly.

References

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