

Digital cholangioscopy in a patient with biliary tract intraductal papillary mucinous neoplasm



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A 52-year-old woman presented with right upper-quadrant pain that had lasted for many months. She had previously undergone 2 ERCPs at an outside institution for suspected stones but was told that no stones were found. MRCP (Fig. 1) showed dilated ducts in the following locations: intrahepatics on the left, left hepatic duct, common hepatic duct, and common bile duct down to the ampulla. The right hepatic duct and intrahepatics were of normal caliber. This was highly suggestive of a left intrahepatic biliary tract intraductal papillary mucinous neoplasm (BT-IPMN) because mucin can cause the severe biliary dilation downstream of the lesion. A stone or lesion above the biliary hilum would not cause the extrahepatic duct to be dilated. A stone or lesion below the hilum would have caused the right-sided intrahepatics to be dilated, in addition to the left.

The decision was made to perform ERCP with digital cholangioscopy to confirm our suspicion. The digital cholangioscopy showed mucin in the common bile duct and common hepatic duct coming from the left biliary system

(Video 1, available online at www.VideoGIE.org). Many left-sided ducts were explored, and a lesion with fronds was seen (Fig. 2). This was consistent with BT-IPMN. The



Figure 2. Digital cholangioscopic image showing a lesion with fronds in the left intrahepatic biliary system.



Figure 1. MRCP view showing dilated ducts in the following locations: intrahepatics on the left, left hepatic duct, common hepatic duct, and common bile duct down to the ampulla. The right hepatic duct and intrahepatics were of normal caliber.

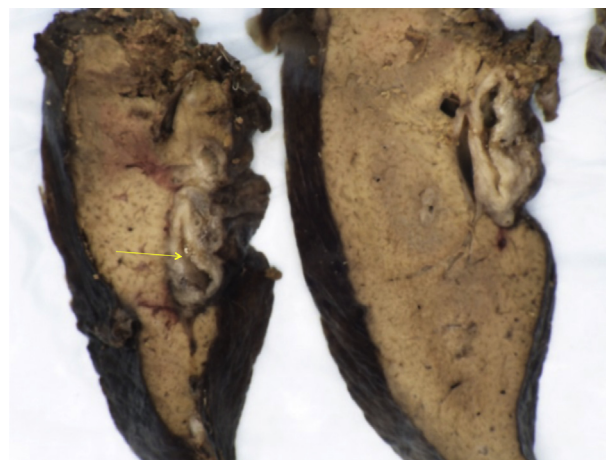


Figure 3. Cross-section of the fixed left lobe hepatectomy specimen showing ductal dilatation (yellow arrow) spanning a length of 3.0 cm with a maximal circumference of 0.7 cm. The background hepatic parenchyma is without lesions.

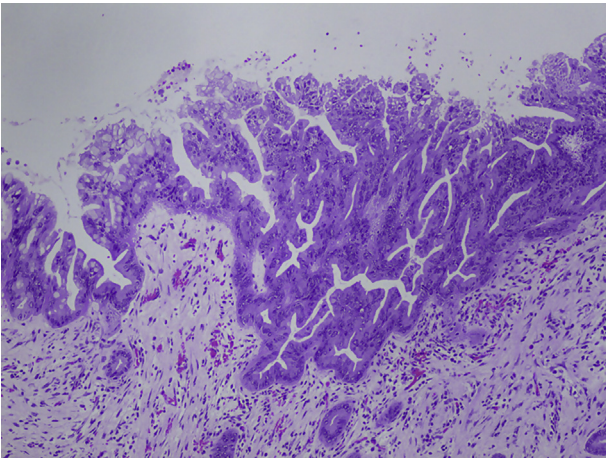


Figure 4. Histologic image showing papillary architecture lined by cells with mildly enlarged nuclei and basophilic cytoplasm with occasionally prominent intracytoplasmic mucin (H&E, orig. mag. $\times 100$).

patient underwent left hepatectomy. Pathologic examination of the gross specimen (Fig. 3) showed an isolated dilated duct. Histologic analysis (Fig. 4) of the dilated duct showed papillary architecture lined by cells with mildly enlarged nuclei and basophilic cytoplasm consistent with BT-IPMN with low-grade dysplasia.

BT-IPMN is often discovered in the 6th to 8th decade of life. BT-IPMN is the biliary counterpart of pancreatic IPMN,¹ with which it shares the same radiologic, histologic, and endoscopic features. It is rare and is its own entity. It is characterized by mucin-secreting papillary lesions involving the intrahepatic and extrahepatic bile ducts. It is a precursor

to cholangiocarcinoma but has a more favorable prognosis than does conventional cholangiocarcinoma.^{1,2}

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Abbreviation: BT-IPMN, biliary tract intraductal papillary mucinous neoplasm.

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