Peroral video cholangioscopic findings in a biliary intraductal mucinous cystic neoplasm

Mucinous cystic neoplasm (MCN) of the liver is a biliary counterpart of pancreatic MCN, usually occurring in the liver, but occasionally extending to the extrahepatic bile duct [1,2]. We present a case of MCN with extrahepatic bile duct extension diagnosed by peroral video cholangioscopy (POVCS).

A 49-year-old woman was admitted with a week of vomiting without abdominal pain, and jaundice. Abdominal ultrasound (Fig. 1), contrast-enhanced computed tomography (Fig. 2), and magnetic resonance cholangiopancreatography (Fig. 3) revealed a multicellular perihilar cystic lesion with dilation of B2, B3, and B4. Endoscopic retrograde cholangiography showed an elliptical defect from the left hepatic duct to the perihilar bile duct (Fig. 4). Intraductal ultrasonography demonstrated multilocular, cyst-in-cyst structures in the extrahepatic bile duct (Fig. 5). Subsequent POVCS (CHF-B260; Olympus, Tokyo, Japan) revealed a mass filling the bile duct covered with smooth and translucent bile duct mucosa, suggesting a subepithelial growth without bile duct communication (Fig. 6; Video 1). A directly visualized biopsy showed no evidence of malignancy. We diagnosed intraductal MCN of the liver based on the findings of the imaging modalities. The patient underwent left lobectomy and caudate lobectomy. A cholangiogram of the resected specimen showed no biliary communication. Histologically, the dilated ducts were filled with a polypoid cystic mass consisting of lining columnar epithelium and ovarian-like stroma, features consistent with MCN with low grade dysplasia. The tumor was located beneath the lining epithelium of the left hepatic duct and there was no communication between the ductal lumen and cystic spaces. There was no evidence of recurrence at 3-year follow-up. This is the first report of biliary intraductal MCN, suggesting an origin from Glisson’s capsule of the large hepatic bile duct. A recent report was the first to describe extrahepatic bile duct intraductal MCN using POVCS [3]. A cystic mass with smooth surface and compression due to distension without bile duct communication may be the characteristic findings of biliary intraductal MCN with POVCS.

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Competing interests: None

Hiroshi Kawakami1,2, Yoshimasa Kubota1,2, Kimitoshi Kubo2, Daisuke Sato3,4, Tomoko Mitsuhashi2, Satoshi Hirano4, Naoya Sakamoto2,5

1 Department of Gastroenterology and Hepatology, Center for Digestive Disease, The University of Miyazaki, Miyazaki, Japan
2 Department of Gastroenterology and Hepatology, Hokkaido University Hospital, Sapporo, Japan
3 Department of Surgical Pathology, Hokkaido University Hospital, Sapporo, Japan
4 Department of Gastroenterological Surgery II, Hokkaido University Graduate School of Medicine, Sapporo, Japan

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Department of Gastroenterology and Hepatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan

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Corresponding author

Hiroshi Kawakami, MD, PhD
Department of Gastroenterology and Hepatology Center for Digestive Disease
The University of Miyazaki
5200, Kihara, Kiyotake-cho, Miyazaki
Miyazaki 889-1692
Japan
Fax: +81-985-85-9802
hirop@med.miyazaki-u.ac.jp

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