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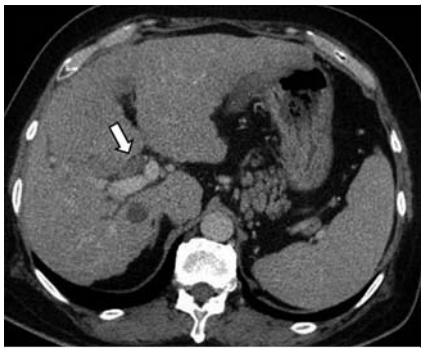
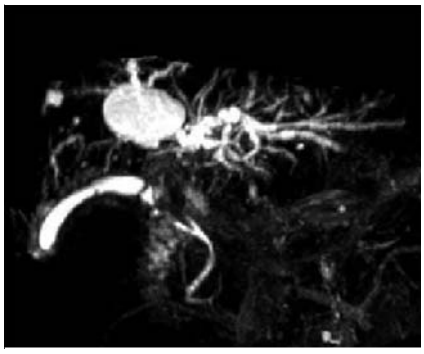
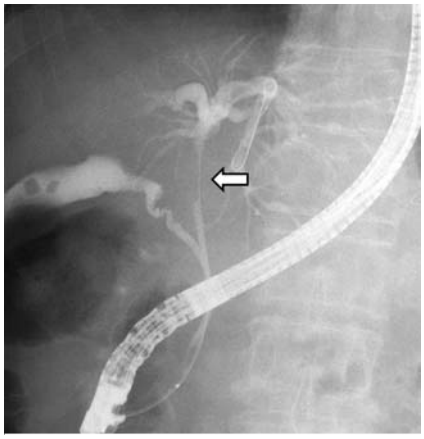
Diagnostic utility of digital cholangioscopy for dislodged bile duct tumor thrombus of hepatocellular carcinoma



▶ **Fig. 1** Computed tomography revealed an intraductal tumor lesion (arrow) from the right hepatic duct to the common hepatic duct, with intrahepatic bile duct dilatation. Liver cirrhosis and liver cyst were also detected, with absence of hepatic tumor.



▶ **Fig. 2** Magnetic resonance cholangiopancreatography revealed hilar bile duct stricture with intrahepatic bile duct dilatation.



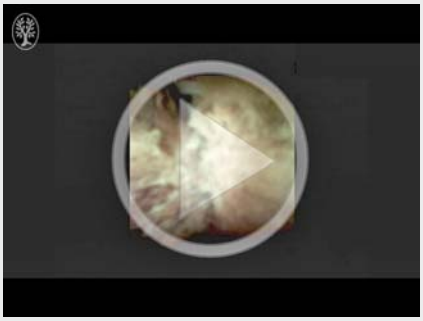
▶ **Fig. 3** Cholangiography revealed hilar bile duct stricture (arrow). The right hepatic duct was not detected because of severe stricture, and the stricture had reached the medial branch bifurcation in the left hepatic duct.

Bile duct tumor thrombus (BDTT) of hepatocellular carcinoma (HCC) is rare, and making a differential diagnosis from bile duct cancer is often challenging [1]. We present a rare case of HCC with BDTT mimicking hilar bile duct cancer, which could be diagnosed by a new digital cholangioscopy system (SpyGlass DS; Boston Scientific Corp., Marlborough, Massachusetts, USA) [2].

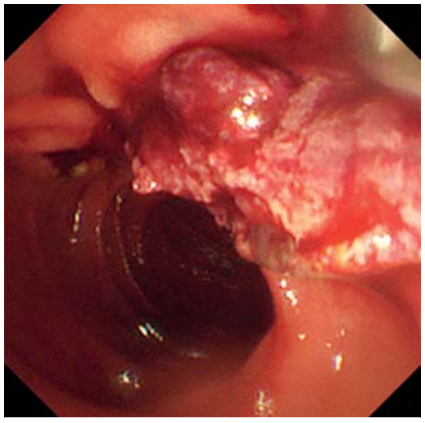
A man in his 60s was admitted because of jaundice. His medical history was unremarkable. Liver enzyme and bilirubin levels were elevated. Computed tomography revealed an intraductal tumor lesion from the right hepatic duct to the common hepatic duct, with intrahepatic bile duct dilatation (▶ **Fig. 1**). Liver cirrhosis and liver cyst were also detected, without hepatic tumor. Magnetic resonance cholangiopancreatography revealed hilar bile duct stricture (▶ **Fig. 2**). Endoscopic retrograde cholangiography revealed that the stricture had reached the medial branch bifurcation in the left hepatic duct, and the right hepatic duct could not be detected because of severe stricture (▶ **Fig. 3**). Hilar bile duct cancer was initially considered based on these findings. However, intraductal ultrasonography revealed that the bile duct wall was regular; thus, cholangioscopy was performed.

In the common hepatic duct stricture, a mold-like tissue fragment was seen within the bile duct lumen with regular bile duct wall (▶ **Video 1**); removal was attempted by using basket and balloon

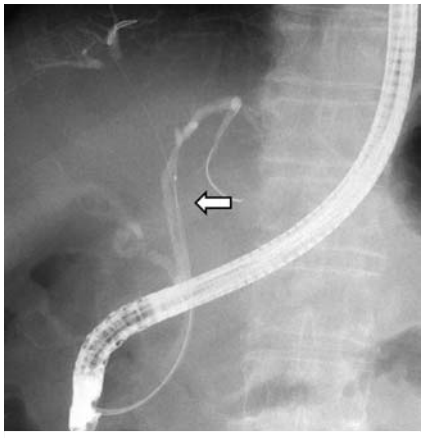
VIDEO 1



▶ Video 1: The cholangioscope was inserted through the working channel of the duodenoscope. In the stricture of the common hepatic duct, a mold-like tissue fragment was seen within the bile duct lumen with regular bile duct wall. Cholangioscopy can be useful to diagnose HCC with BDTT, and a mold-like tissue fragment is a typical feature of dislodged BDTT. Cholangioscopy should be considered when BDTT cannot be ruled out, particularly in patients with liver cirrhosis.



▶ **Fig. 4** Endoscopic view showing tissue fragment removed from the bile duct.



▶ **Fig. 5** After endoscopic biliary extraction and drainage, no stricture was detected from the left hepatic duct to the common hepatic duct (arrow), but the right hepatic duct stricture persisted.

catheters. Subsequently, many tissue fragments were discharged into the duodenum and were collected through the scope (▶ **Fig. 4**).

After endoscopic extraction and nasobiliary drainage, no stricture was detected from the left hepatic duct to the common hepatic duct, but the right hepatic duct stricture persisted (▶ **Fig. 5**). Tissue pathological findings revealed HCC with necrotic background. Thus, we diagnosed a BDTT of the right hepatic duct that dislodged into the common hepatic duct.

Endoscopy_UCTN_Code_CCL_1AZ_2AZ

Competing interests

None

The Authors

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References

[1] Wu Z, Guo K, Sun H et al. Caution for diagnosis and surgical treatment of recurrent cholangitis: lessons from 5 cases of bile duct tumor thrombus without a detectable intrahepatic tumor. Medicine 2014; 93: e80
[2] Navaneethan U, Hasan MK, Kommaraju K et al. Digital, single-operator cholangiopancreatoscopy in the diagnosis and management of pancreatobiliary disorders: a multicenter clinical experience (with video). Gastrointest Endosc 2016; 84: 649 – 655

Bibliography
DOI http://dx.doi.org/10.1055/s-0042-121007
Endoscopy 2017; 49: E33–E34

Stuttgart · New York
ISSN 0013-726X