An unusual case of recurrent hepatocellular carcinoma presenting as an indeterminate right intrahepatic duct stricture

A 46-year-old man with segment 8 hepatocellular carcinoma (HCC) from hepatitis C-related, Child–Pugh class A cirrhosis underwent successful hepatic resection. This was complicated by a postoperative bilioma that was treated by percutaneous drainage. He presented again 6 months later with abdominal pain and cholestasis. Computed tomography (CT) of the liver showed no tumor recurrence. Magnetic resonance imaging (MRI) showed postcholecystectomy status, a mildly dilated common bile duct, non-visualization of the central right intrahepatic duct, a focal defect in the left intrahepatic duct, and proximal dilatation of both intrahepatic ducts (Fig. 1). Cholangioscopy using the SpyGlass DS Direct Visualization System (Boston Scientific, Natick, Massachusetts, USA) was performed. Blood clots were visualized in the left intrahepatic duct. A friable mass was visualized in the right intrahepatic duct (Video 2) and was biopsied (Video 1). Bilateral stenting was performed. Histology revealed recurrent HCC (Fig. 3).

HCC recurrence tends to present as a mass, so patients routinely undergo surveillance CT or MRI scans at scheduled intervals [1]. Uncommonly intraluminal biliary obstruction may arise postoperatively because of hemobilia, migration of tumor debris, or a tumor mass with continuous growth along the biliary tree [2]. In this case, the only positive finding was the MRI scan that demonstrated an indeterminate stricture with no mass.

The first-generation Spyglass cholangioscopy system, which uses a fiber-optic probe, has been shown to be useful in determining the nature of indeterminate biliary strictures [3]. A systemic review demonstrated that the pooled sensitivity and specificity of cholangioscopy with targeted biopsies for the detection of cholangiocarcinoma were 66.2% and 97.0%, respectively [4]. The second-generation digital Spyglass system has much better cholangioscopic image resolution, thereby facilitating endoscopic diagnosis and targeted biopsies. In this case, it was used to diagnose recurrent HCC with a rare presentation of isolated intrahepatic bile duct stricture with no associated liver parenchymal lesion.

Competing interests: None

Fig. 1 Magnetic resonance cholangiopancreatography (MRCP) showing non-visualization of the central right intrahepatic duct and a focal defect in the left intrahepatic duct.

Fig. 2 Cholangioscopic image of a friable mass in the right intrahepatic duct.

Video 1

Spyglass cholangioscopy and biopsy of a recurrent intraductal hepatocellular carcinoma, including views of the initial magnetic resonance cholangiopancreatography (MRCP) scan and the final histology stained with hematoxylin and eosin (H&E) and for immunohistochemistry.
Fig. 3  Histology of the biopsy specimen showing recurrent hepatocellular carcinoma:  

a, on hematoxylin and eosin (H&E) staining;  
b, with positivity for glycan-3 on immunohistochemical staining.

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