Biliary Tubulovillous Adenoma

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An 86-year-old man presented with nausea, lethargy and a mixed pattern derangement of his liver function tests with normal synthetic function. His liver biochemistry showed the following: total bilirubin 0.53 mg/dL (normal, <1.2 mg/dL), alkaline phosphatase 200 IU/L (normal, 40-140 IU/L), gamma-glutamyl transpeptidase 418 IU/L (normal, 10-50 IU/L), aspartate aminotransferase 280 IU/L (normal, 15-50 IU/L), alanine aminotransferase 288 IU/L (normal, 7-40 IU/L). This was on a background of previous cholecystectomy for cholelithiasis and a left hemicolectomy for colonic adenocarcinoma 10 years prior to this presentation. There was no history of alcohol consumption, smoking, weight loss or bowel symptoms. Abdominal ultrasonography demonstrated a dilated 14mm common bile duct (CBD) and features suggestive of a common hepatic duct mass (Fig. 1). The patient's lipase, serum immunoglobulin-G4 levels, anti-mitochondrial antibody, carcinoembryonic antigen and cancer antigen19-9 were all normal. Magnetic resonance cholangiopancreatography could not be performed as the patient had a cardiac pacemaker. Endoscopic retrograde cholangiopancreatography (ERCP) revealed dilated intrahepatic bile ducts with an irregular filling defect in the common hepatic duct just distal to the porta hepatis. Balloon trawls retrieved three soft tissue fragments each 7mm in diameter and a plastic biliary stent was successfully placed. Histopathology showed closely packed tubular structures and slender villi formed by

uniform columnar cells, confirming a diagnosis of tubulovillous adenoma (TVA) with moderate grade dysplasia (Fig. 2).

After discussion at a hepatopancreatobiliary multidisciplinary meeting, the patient underwent resection of the porta hepatis with Roux-en-Y hepaticojejunostomy. Intraoperative findings included a polypoid lesion (18 x 12 x 7mm) in the proximal CBD (Fig. 3), and a 6mm loose papillary lesion at the opening of the cystic duct that was not attached to the duct wall. Histopathology confirmed the lesions to be polypoid TVAs. The excised common hepatic duct contained a small amount of residual adenomatous tissue consistent with incomplete retrieval at ERCP.

While TVAs commonly arise from colonic and rectal mucosa, those originating from the biliary system are exceedingly rare. Due to their rarity, biliary TVAs are often overlooked as a cause of biliary obstruction, and often confused for other malignant lesions including cholangiocarcinoma, lymphoma and carcinoid tumors. Although the adenoma to carcinoma transformation risk is undetermined, the risk of malignancy is generally considered to be similar to adenomas arising from other regions of the gastrointestinal tract. While endoscopic resection by ERCP has been proposed, due to the high risk of incomplete resection and adenoma recurrence, complete surgical excision of the adenoma-containing bile duct appears to be the treatment of choice.

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