Preoperative diagnosis of multiple intraductal tubulopapillary neoplasms of the pancreas: dynamic imaging features from endoscopic ultrasound

A 60-year-old man with recurrent pancreatitis was admitted to our hospital for further examination and treatment. Abdominal computed tomography highlighted multiple cystic lesions in the pancreas (Fig. 1a). Magnetic resonance imaging revealed atrophic pancreatic parenchyma and segmentally dilated pancreatic duct (Fig. 1b). The diagnosis of intraductal papillary mucinous neoplasm (IPMN) or intraductal tubulopapillary neoplasm (ITPN) was proposed. Subsequent endoscopic ultrasound (EUS) showed multiple cystic lesions with solid tumors inside extending along the dilated main pancreatic duct (Fig. 1c). The intraductal tumor was surrounded by pancreatic fluid in the head of the pancreas, representing the “cork-of-wine-bottle sign;” however, the hypoechoic tumors connecting with anechoic fluids were displayed as two different colors in the dilated duct, indicating the “2-tone duct sign” (Video 1). Based on the

Fig. 1 Imaging manifestations of intraductal tubulopapillary neoplasm in a 60-year-old man. a Transverse dynamic computed tomography showed cystic lesions (arrows) in the dilated pancreatic duct. b Transverse magnetic resonance imaging also indicated multiple cystic lesions along the dilated duct in the head, body, and tail of the pancreas (arrows). c Transverse endoscopic ultrasound showed several intraductal tumors slightly protruding from the segmentally dilated pancreatic ducts, in which the “2-tone duct sign” (white and red arrows) and “cork-of-wine-bottle sign” (arrow) can be seen.
above two typical imaging findings [1, 2], ITPN was reliably diagnosed preoperatively using EUS; thus, surgery was recommended. The resected specimen was identified with solid tumors in the dilated pancreatic duct manifesting as soft and grayish yellow. No mucin was observed. Histopathology showed the tumor consisted of tubulopapillary structures with cylindrical cells and high grade dysplasia (Fig. 2a). On immunohistochemistry, the tumor was negative for MUC2, MUC6, CK-20, and CDX2 (Fig. 2b), and positive for CK7, CAM5.2, and MUC1. The proliferative index of Ki-67 reached 70%.

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Endoscopy_UCTN_Code_CCL_1AZ_2AM

Competing interests

The authors declare that they have no conflict of interest.
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Bibliography

Endoscopy
DOI 10.1055/a-1290-7182
ISSN 0013-726X
published online 2020
© 2020. Thieme. All rights reserved.
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

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