A case of high grade pancreatic intraepithelial neoplasia diagnosed by endoscopic ultrasound-guided fine needle aspiration

We report a case of high grade pancreatic intraepithelial neoplasia diagnosed by endoscopic ultrasound-guided fine needle aspiration (EUS-FNA) (Video 1). The patient was a 68-year-old man who came for a checkup. Main pancreatic duct (MPD) dilatation was observed on abdominal ultrasonography. His tumor marker levels were normal. Contrast-enhanced computed tomography showed a dilated caudal MPD and pancreatic parenchyma atrophy, consistent with the interruption of the MPD in the pancreatic body (Fig. 1). Magnetic resonance cholangiopancreatography revealed caudal MPD dilatation and a small cystic lesion around the MPD stenosis. Endoscopic ultrasound (EUS) showed a faint 10-mm hypoechoic area around the pancreatic duct with indistinct borders, irregular contours, and heterogeneous internal echogenicity. High grade pancreatic intraepithelial neoplasia or minimally invasive carcinoma was suspected. Endoscopic pancreatography revealed a 20-mm stenosis in the MPD (Fig. 2); endoscopic nasopancreatic drainage and subsequent pancreatic juice cytology were performed [1]. All samples were classified as Class III. EUS-FNA was performed to evaluate the faint hypoechoic area in order to exclude malignancy (Fig. 3). Four punctures were performed using EZ-shot3 plus (22G; Olympus Medical Systems Corp., Tokyo, Japan). The patient developed mild pancreatitis that improved with conservative treatment. The pathological diagnosis was adenocarcinoma (Fig. 4). He underwent laparoscopic pancreatic tail resection with a preoperative diagnosis of T1aN0M0 stage I or TisN0M0 stage 0. Microscopic examination revealed papillary growth of high grade pancreatic intraepithelial neoplasia.
neoplasia in the branch of the pancreatic duct contiguous with the MPD (Fig. 5). There was no invasion of the pancreatic parenchyma. The final pathological diagnosis was TisN0M0 stage 0. We speculated that tumor cells could be confirmed by EUS-FNA because of the widespread presence of the high grade pancreatic intraepithelial neoplasia in the branched pancreatic duct and the weak cell adhesion of the cancer. There has been only one previous report of high grade pancreatic intraepithelial neoplasia diagnosed by EUS-FNA [2]. We encountered a high grade pancreatic intraepithelial neoplasia case diagnosed by EUS-FNA as a rescue for negative pancreatic juice cytology.

Funding

The National Cancer Center Research and Development Fund 31-A-13
Japanese Foundation for Research and Promotion of Endoscopy
http://dx.doi.org/10.13039/100018254

Competing interests

The authors declare that they have no conflict of interest.

The authors

Hidetoshi Kitamura1, Susumu Hijioka1, Yoshikuni Nagashio1, Daisuke Ban2, Minoru Esaki2, Takuji Okusaka1, Yutaka Saito3
1 Department of Hepatobiliary and Pancreatic Oncology, National Cancer Center Hospital, Tokyo, Japan
2 Department of Hepatobiliary and Pancreatic Surgery, National Cancer Center Hospital, Tokyo, Japan
3 Endoscopy Division, National Cancer Center Hospital, Tokyo, Japan

Corresponding author

Susumu Hijioka, MD
Department of Hepatobiliary and Pancreatic Oncology, National Cancer Center Hospital, 5-1-1 Tsukiji, Chuo-ku, Tokyo 104-0045, Japan
Fax: +81-3-3542-3815
shijioka@ncc.go.jp
Fig. 5 Tumor cells with a high nuclear-to-cytoplasmic ratio with papillary growths in the pancreatic duct. There was no invasion into the pancreatic parenchyma, and the tumor was confined to the epithelium of the pancreatic duct, indicating high grade pancreatic intraepithelial neoplasia. It was extensively present from the main pancreatic duct to the branch ducts.

References


Bibliography

Endoscopy
DOI 10.1055/a-1730-3973
ISSN 0013-726X
published online 2022
© 2022. Thieme. All rights reserved.
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

Endoscopy E-Videos is an open access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online. Processing charges apply (currently EUR 375), discounts and waivers acc. to HINARI are available.

This section has its own submission website at https://mc.manuscriptcentral.com/e-videos