A 64-year-old woman with newly diagnosed type 2 diabetes mellitus was admitted with intermittent abdominal pain of 3 years’ duration. Computed tomography (CT) showed multifocal pancreatic cystic lesions with a dilated main pancreatic duct and calcification of a cyst wall (Fig. 1), raising suspicion of a mucinous neoplasm of the pancreas. Needle-based confocal laser endomicroscopy (nCLE) (AQ-Flex 19; Mauna Kea Technologies, France) is a novel imaging technique that enables real time in vivo microscopic imaging of a cyst wall during endoscopy, with a promising diagnostic yield [1–3]. The diagnosis of intraductal papillary mucinous neoplasm (IPMN) is indicated by the presence of finger-like papillae, while mucinous cystic neoplasms (MCNs) have a characteristic single band-like epithelium on nCLE [1–3].

We performed endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) in our patient, with EUS confirming multifocal anechoic cystic lesions extending from the head of the pancreas to the tail, with hyperechoic margins. nCLE showed dark aggregates of cells with surrounding small vessels (Video 1), which had indicated features concerning for neoplasia in an earlier study [4]. The cyst fluid had a mucinous appearance and viscosity, and FNA cytology confirmed neoplastic mucinous cells (Fig. 2a, b). The patient consequently underwent a total pancreatectomy (Fig. 3). Histopathological examination revealed an IPMN with high grade dysplasia (Fig. 4). Lymph node sampling was negative for metastasis. Wider use of nCLE has resulted in consensus on some of the characteristic features of common pancreatic cystic lesions, but this is an evolving area with scope for further definition of diagnostic features. In this case, nCLE images showed features concerning for neoplasia prior to surgery. The pattern of dark aggregates of cells with surrounding small vessels had previously been described in a study using nCLE [4].

Video 1 Needle-based confocal laser endomicroscopy (nCLE) in the diagnosis of multifocal intraductal papillary mucinous neoplasm with high grade dysplasia: endoscopic ultrasound shows multifocal cystic lesions with hyperechoic margins, and nCLE shows dark aggregates of cells with surrounding small vessels.

Fig. 1 Computed tomography (CT) image showing multifocal pancreatic cystic lesions with dilated main pancreatic duct (black arrow) and calcification of cyst wall (white arrow). The patient was a 64-year-old woman with newly diagnosed type 2 diabetes mellitus and with intermittent abdominal pain of 3 years’ duration.

Fig. 2a Fine needle aspiration (FNA) specimen showing mucinous appearance. b FNA cytology shows neoplastic mucinous cells (hematoxylin and eosin [H&E], ×200).
aggregates of cells surrounded by small vessels may be a promising characteristic in identification of malignant pancreatic cystic lesions (MPCLs). Further studies are required to confirm these findings and to establish nCLE criteria in the diagnosis of MPCLs.

Endoscopy_UCTN_Code_CCL_1AF_2AF_3AC

Competing interests
None

The Authors
Yun-Lu Feng1, Ai-Ming Yang1, Xi Wu1, Zhilan Meng1, Xiaoyan Chang2, Zhiyong Liang2, Junchao Guo1
1 Department of Gastroenterology, Peking Union Medical College Hospital, Beijing, China
2 Department of Pathology, Peking Union Medical College Hospital, Beijing, China
3 Department of Surgery, Peking Union Medical College Hospital, Beijing, China

Corresponding author
Ai-Ming Yang, MD
Department of Gastroenterology, Peking Union Medical College Hospital, 1 Shuaifuyuan, Wangfujing Avenue, Beijing 100730, China
Fax: +86-10-69155017
yangaiming@medmail.com.cn

Acknowledgment
The authors thank Sameer Siddique MD, from Einstein Medical Center Philadelphia, United States, for his kind help in language editing.

References

Bibliography
DOI https://doi.org/10.1055/s-0043-115889
Published online: 3.8.2017
Endoscopy 2017; 49: E277–E278
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

E-Videos
https://eref.thieme.de/e-videos

Endoscopy E-Videos is a free 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.

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