Pancreatic mucinous cystic neoplasm masquerading as pseudocyst

Figure 1. **A**, Magnetic resonance imaging scan of the abdomen demonstrating a 3.2-cm cystic lesion in the distal body of the pancreas. **B**, EUS view revealing a 2.4 × 2.2-cm cystic lesion with a thick wall in the pancreatic body. **C**, **D**, In vivo needle-based confocal laser endoscopic views showing features of pancreatic mucinous cystic neoplasms (MCNs) (**C**) and pseudocysts (**D**): epithelial bands without a papillary conformation and white shining particles on a dark background, respectively. **E**, Postsurgical ex vivo probe-based confocal laser endoscopic (pCLE) view compared with histopathologic view (**F**) in a patient with a pancreatic mucinous cystic neoplasm. The characteristic CLE findings of MCNs are epithelial bands without a papillary conformation.

A 44-year-old woman with a presumed pancreatic pseudocyst presented with recurrent episodes of abdominal pain, nausea, and emesis. Magnetic resonance imaging of the abdomen demonstrated a 3.2-cm cystic lesion in the distal body of the pancreas containing a single hairline-thin septation without nodular components or dilation of the main pancreatic duct (Fig. 1A). EUS revealed a 2.4 × 2.2-cm cystic lesion with a thick wall in the pancreatic body (Fig. 1B). EUS-guided in vivo needle-based confocal laser endomicroscopy (nCLE) (Cellvizio, Mauna Kea Technologies, Paris, France) demonstrated features of both mucinous cystic neoplasms (MCNs) and pseudocysts, namely, nonpapillary epithelial bands and white shining particles on a dark background, respectively (Figs. 1C and D; Video 1, available online at www.VideoGIE.org). Analysis of the cyst fluid revealed extreme elevations in carcinoembryonic antigen (CEA) (2400 ng/mL) and amylase (>10,000 U/L) levels. Because of laboratory and imaging findings that were concerning for a neoplastic

lesion, the patient underwent a laparoscopic distal pancreatectomy and splenectomy. Ex vivo probe-based confocal laser endomicroscopy (pCLE) was performed with a Gastroflex ultrahigh-definition probe (Cellvizio) and image patterns showed epithelial bands without a papillary conformation, more consistent with a MCN than a pseudocyst (Video 1, available online at www.VideoGIE.org). Biopsy specimens were obtained from the lesion at foci of ex vivo pCLE. Histopathologic examination and immunostains confirmed an MCN with moderate dysplasia and correlated with the ex vivo pCLE findings (Figs. 1E and F). Here, we show that CLE may help improve the diagnostic approach to presumed pancreatic pseudocysts and unmask potential underlying neoplasms. Although MCNs and pseudocysts have distinct CLE patterns, this case illustrates the importance of establishing reference standards for various cystic lesions to help guide management decisions. In conclusion, CLE has the potential to

Written transcript of the video audio is available online at www.VideoGIE.org.

supplement standard imaging techniques in the workup of pancreatic cystic lesions.

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