

Endoscopic intraductal radiofrequency ablation of remnant intrapapillary mucinous neoplasm with acute hemorrhage after incomplete surgical resection



Fig. 1 Pancreatic duct system in the head with visible stenosis caused by the bleeding tumor.

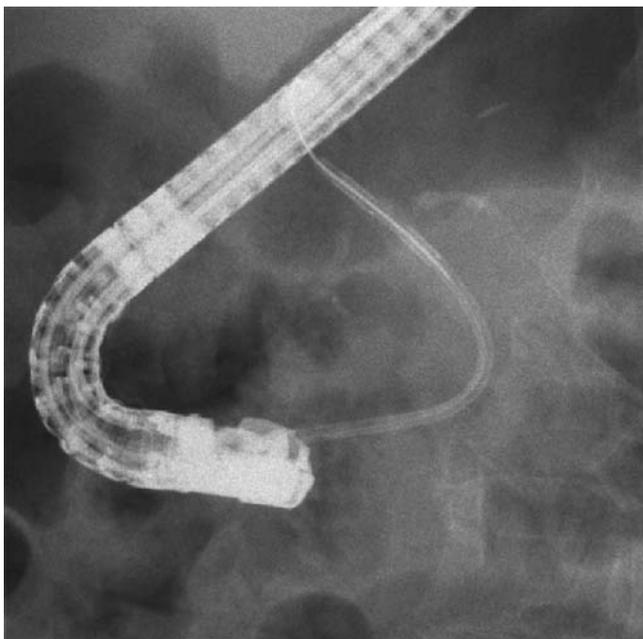


Fig. 2 Radiofrequency ablation probe positioned in the stenosis during ablation.

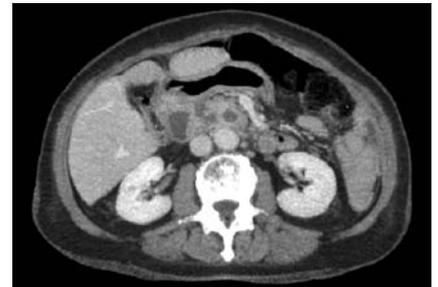


Fig. 3 Computed tomography scan 2 days after radiofrequency ablation, showing a hypodense lesion in the pancreatic head, corresponding to the ablation area.

An 83-year-old woman presented with recurrent hemosuccus pancreaticus. The patient had previously undergone a distal pancreatic resection due to intrapapillary mucinous neoplasm, with main duct involvement of the tail. Upper endoscopy revealed active bleeding through the ampulla of Vater. During a previous episode

of pancreatic bleeding, intraductal injection of fibrin glue had been performed. Endoscopic retrograde pancreatography demonstrated dilated pancreatic ducts of the remnant pancreatic head. Approximately 3 cm above the papilla, the main pancreatic duct showed a 10-mm-long irregular stricture (▶ **Fig. 1**). As the pa-

tient refused surgical treatment, radiofrequency ablation (RFA) was performed using a bipolar RFA catheter (EndoHPB; EMcision, Montreal, Canada) designed for biliary RFA. The RFA catheter was advanced over a 0.035-inch guidewire (Jagwire; Boston Scientific Corp., Natick, Massachusetts, USA) (▶ **Fig. 2**). RFA was applied for a total of 90 seconds using 8W soft coagulation mode, effect 1 (ERBE VIO 300 D; ERBE Elektromedizin GmbH, Tübingen, Germany). The patient developed mild pancreatitis following RFA, with a maximum serum lipase of 9.6 $\mu\text{mol/L}$ after 12 hours, which returned to normal within 24 hours. Computed tomography scan 2 days after ablation showed a 20-mm cystic ablation area in the pancreatic head (▶ **Fig. 3**). The patient developed no further bleeding during 10 weeks of follow-up.

Whereas endoscopic ultrasound-guided RFA is under evaluation for the ablation of pancreatic lesions, we are not aware of any previous case of direct intraductal application of RFA [1]. Intraductal RFA has the potential to treat complications of intraductal tumor growth such as bleeding. Bleeding from the pancreatic duct often requires radiological or surgical intervention [2]. In the present case, RFA was used to treat bleeding. However, RFA may also be a treatment option for the treatment of small intraductal neoplasms. At present, intraductal RFA is approved for the treatment of malignant biliary strictures [3] and is an alternative to photodynamic therapy [4].

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Competing interests: None

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