

Radiologic and endoscopic treatment for a disconnected pancreatic duct syndrome associated with percutaneous pancreatic fistula: achieving the “internalization of the fistula”

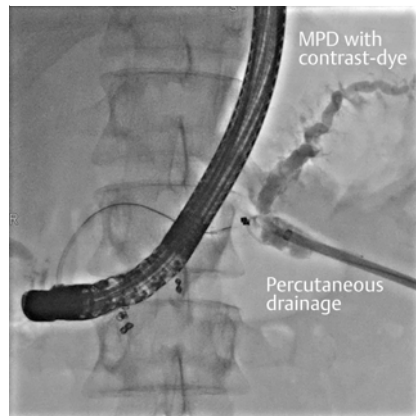
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A 33-year-old man was referred to our institution for the management of a percutaneous pancreatic fistula after acute pancreatitis due to SARS-CoV-2 infection. He developed a peripancreatic collection (PPC), which was percutaneously drained because of infection. After resolution of the collection, percutaneous leakage from the main pancreatic duct (MPD) was observed. The patient underwent endoscopic retrograde cholangiopancreatography (ERCP) with biliary and pancreatic sphincterotomy, and placement of both pancreatic and biliary stents; however, the leak persisted.

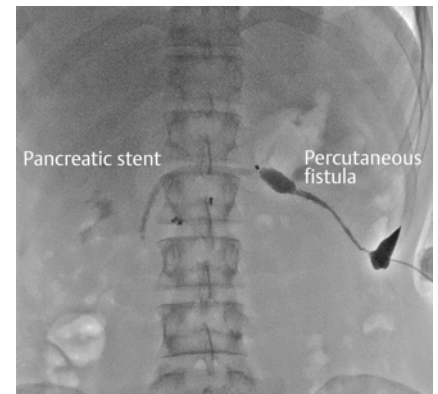
He was then referred to our institution, where initial management included ERCP with placement of two transpapillary pancreatic stents and the removal of the percutaneous catheter; however, fluid continued to leak from the percutaneous fistula (► Fig. 1). A multidisciplinary board decided to perform a rendezvous procedure with interventional radiology to facilitate endoscopic ultrasound (EUS) transgastric drainage of the pancreatic area that was currently draining into the percutaneous fistula (► Video 1) [1–3].

The procedure included an initial ERCP with replacement of the two pancreatic stents (► Fig. 2) while the radiologist percutaneously placed a guidewire through the fistula to the point of leakage in the MPD. Then, using EUS, the point at which the percutaneous guidewire entered the MPD was identified and, under EUS guidance, a second guidewire was inserted transgastrically into the MPD through a 19-gauge needle and then advanced out through the percutaneous fistula (► Fig. 3). Dilation up to 10 mm was performed to create a transgastric pancreatic fistula.

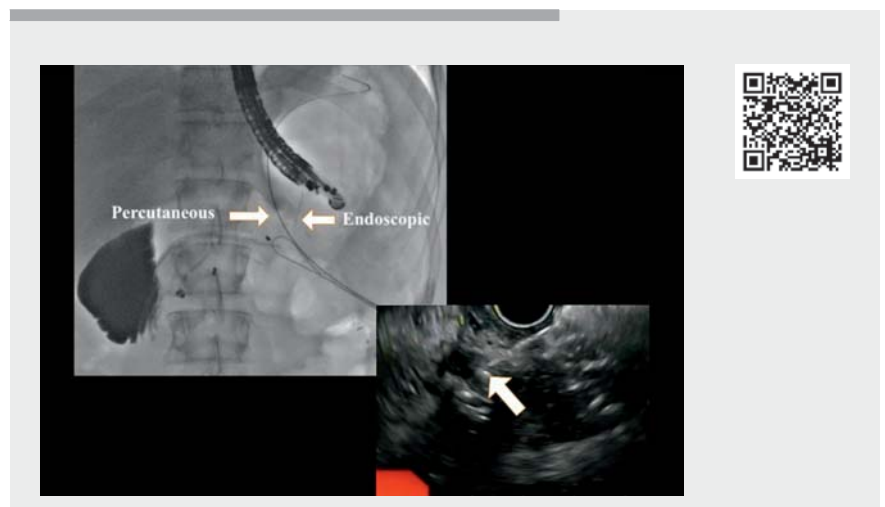
The next step was to percutaneously insert a double-pigtail (10 Fr) stent, releasing the distal side into the stomach and



► Fig. 1 Fluoroscopic view of injection of contrast dye from the percutaneous fistula, showing no drainage into the duodenum through the two pancreatic stents.



► Fig. 2 Fluoroscopic view through the percutaneous fistula showing normal aspect of pancreatography of the body and tail downstream of the interrupted main pancreatic duct.



► Video 1 Management of pancreato-cutaneous fistula after percutaneous drainage of peripancreatic collection.

the proximal side into the MPD, in order to stabilize the newly created fistula. Another transgastric plastic stent was endoscopically placed through the gastropancreatic fistula (► Fig. 4). Injection of contrast dye through the percutaneous fistula confirmed complete drainage into the stomach.

In conclusion, the procedure achieved complete exclusion and resolution of the pancreato-cutaneous fistula.

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► **Fig. 3** Endoscopic ultrasound (EUS) view of the transgastric EUS-guided insertion of a guidewire into the main pancreatic duct (MPD). FNB, fine-needle biopsy.



► **Fig. 4** Double-pigtail stent and plastic stent through the newly created gastro-pancreatic fistula.

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Competing interests

The authors declare that they have no conflict of interest.

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