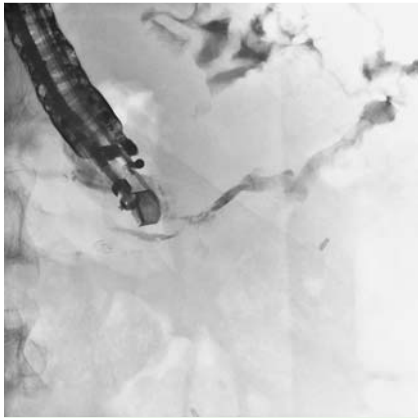


## Endoscopic transgastric pancreatic fistula anastomosis as treatment for a refractory pancreatic duct leak after distal pancreatectomy



**Fig. 1** Fluoroscopic image demonstrating endoscopic ultrasound-guided contrast injection, which filled the main pancreatic duct as well as the fistulous tract.

A 45-year-old man underwent distal pancreatectomy for chronic pancreatitis. Over the ensuing 2 years he developed recurrent pancreatic fluid collections (PFCs) from pancreatic duct leakage at the resection site. He underwent repeated surgery, percutaneous drainage, and placement of pancreatic duct stents. Endoscopic transmural drainage was suggested on several occasions but rejected by the surgical team.

Following recent pancreatic duct stent removal, left upper quadrant abdominal pain recurred. Computed tomography showed a small, poorly defined peripancreatic collection. Transgastric drainage was undertaken.

A linear-array echoendoscope was used to identify and puncture the PFC using a



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19G fine-needle aspiration (FNA) needle. Under fluoroscopy, contrast was injected and filled a long fistulous tract that communicated with the main pancreatic duct (Fig. 1). Attempted guidewire passage into the fistulous tract was unsuccessful. The echoendoscope was removed and a duodenoscope was inserted. Endoscopic retrograde cholangiopancreatography (ERCP) confirmed a pancreatic duct leak into the fistulous tract. In order to serve as a target for endoscopic ultrasound (EUS)-guided puncture, a 10–12-mm dilating balloon catheter was advanced over a guidewire through the pancreatic duct and into the fistulous tract, in a procedure similar to that which has been described for EUS-guided gastroenterostomy (Video 1) [1]. The balloon was inflated

(Fig. 2), and the duodenoscope was removed from the mouth leaving the inflated balloon inside the fistulous tract. As the endoscope could not be removed from the balloon catheter, it was detached from the processor and placed alongside the patient. The echoendoscope was reinserted alongside the balloon catheter. Using endosonographic and fluoroscopic visualization, the balloon was identified from the stomach and punctured using a 19-G FNA needle. A stiff 0.035-inch guidewire was coiled inside the fistulous tract. A gastro-fistula anastomosis was created using a needle-knife and balloon dilator followed by placement of two 7-Fr double-pigtail plastic stents. The patient, who underwent the treatment as an outpatient, tolerated the procedure well. At follow-up 8 weeks later he remained well.

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**Competing interests:** Dr. Baron is a consultant for W.L. Gore, Boston Scientific, Olympus, and Cook Endoscopy.

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**Fig. 2** The inflated balloon dilator within the fistula served as a target for endoscopic ultrasound-guided puncture.