

Endoscopic ultrasound-guided drainage using a forward-viewing echoendoscope for peripancreatic fluid collection after Child resection

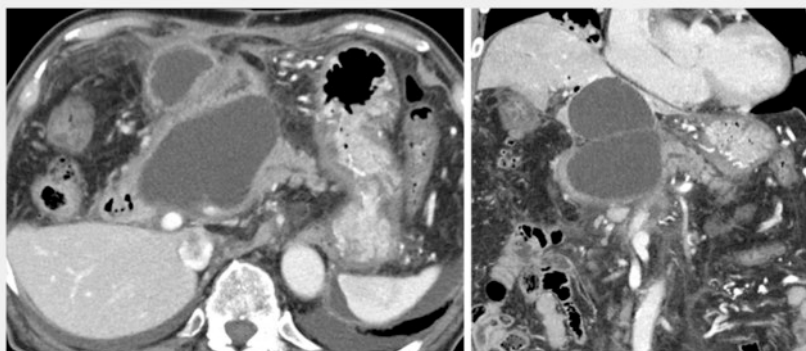
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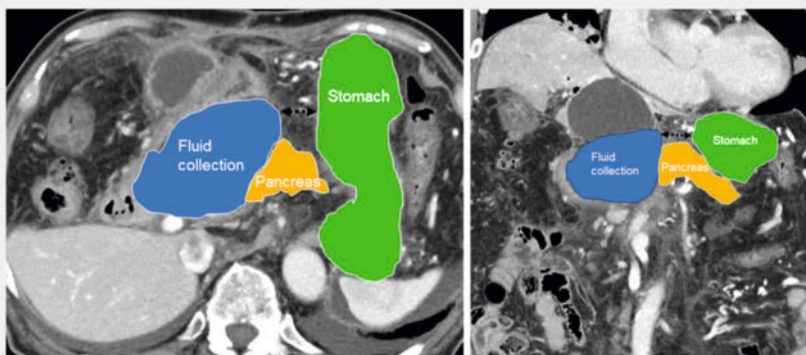
▶ Video 1 Endoscopic ultrasound-guided drainage using a forward-viewing echoendoscope for peripancreatic fluid collection following modified Child resection.

Peripancreatic fluid collection (PFC) due to pancreatic leakage is one of the significant complications arising following pancreatic surgery. Although endoscopic ultrasound (EUS)-guided drainage is less invasive than other methods in treating PFCs, it requires the drainage area to be in contact with the gastrointestinal tract accessible by the echoendoscope [1]. In patients with surgically altered anatomy, an oblique-viewing echoendoscope, which is mainly used for EUS-guided drainage, encounters technical difficulties in the jejunum. Recently, the usefulness of a forward-viewing echoendoscope in such cases has been reported [2,3].

We experienced a case of afferent limb syndrome due to postoperative PFC at the pancreaticojejunal anastomosis following a modified Child resection in a 70-year-old man (▶ Fig. 1). As the fluid collection was remotely located from the stomach (▶ Fig. 2), and the afferent limb was in close proximity (▶ Fig. 3), EUS-guided drainage was attempted using a



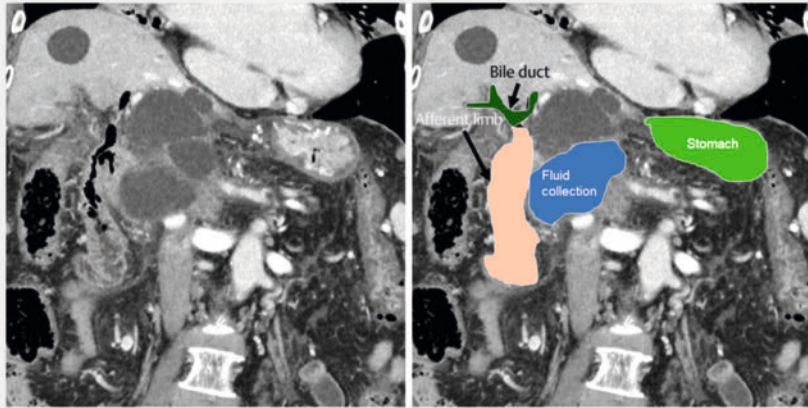
▶ Fig. 1 Computed tomography (CT) showing a large pancreatic fluid collection at the pancreaticojejunal anastomosis site following modified Child resection in a 70-year-old man.



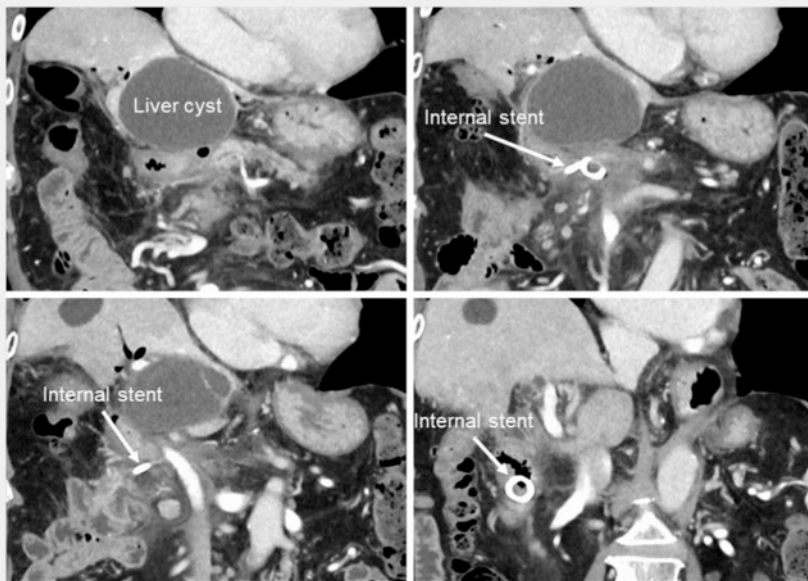
▶ Fig. 2 CT with overlaid schema showing the distance between the fluid collection and the stomach. As the fluid collection developed at the pancreaticojejunal anastomosis site, it was remotely located from the stomach.

forward-viewing echoendoscope (TGF-UC260; Olympus Optical, Tokyo, Japan) (▶ Video 1). Confirming the direction to reach the afferent limb was made relatively easy using the forward-viewing echoendoscope. Based on computed tomography (CT) findings, the target fluid collection could be confirmed by EUS observation where the scope was withdrawn a few centimeters from the choledochojejunal anastomosis. A 19G needle was used for puncture, a guidewire was placed, and the puncture site was dilated using a 4-mm tapered bal-

loon. For double-wire indwelling, a double-lumen catheter was used, and the procedure was completed with placement of both internal and external stents. Immediately following the procedure, the patient showed symptom improvement, and 2 months later CT confirmed complete disappearance of the PFC (▶ Fig. 4). Conventional EUS-guided drainage predominantly employs an oblique-viewing echoendoscope, which presents considerable challenges and perforation risks when intubating in the afferent limb. In contrast, the forward-viewing echo-



► **Fig. 3** CT and the same image with overlaid schema showing the afferent limb and the fluid collection in close proximity.



► **Fig. 4** CT taken 2 months following drainage showing complete disappearance of the fluid collection.

endoscope provides a superior and safer approach, offering precise echo-guided puncture determination.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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References

- [1] Voermans RP, Ponchon T, Schumacher B et al. Forward-viewing versus oblique-viewing echoendoscopes in transluminal drainage of pancreatic fluid collections: a multicenter, randomized, controlled trial. *Gastrointest Endosc* 2011; 74: 1285–1293. doi:10.1016/j.gie.2011.07.059
- [2] Itoi T, Itokawa F, Sofuni A et al. Late bleeding after EUS-guided transjejunal drainage of a pancreatic pseudocyst in a Roux-en-Y patient. *Dig Endosc* 2011; 1: 51–53. doi:10.1111/j.1443-1661.2011.01141.x
- [3] Tomoda T, Kato H, Akimoto Y et al. Endoscopic ultrasonography-guided transjejunal drainage for postoperative pancreatic fistula using forward-viewing echoendoscope. *Clin J Gastroenterol* 2015; 8: 228–231. doi:10.1007/s12328-015-0580-0

Bibliography

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