

EUS-guided choledochoduodenostomy for biliary drainage using tapered-tip plastic stent with multiple fangs

A 52-year-old man presented with abdominal pain and jaundice for 2 months. Computed tomography (CT) revealed a huge mass at the pancreatic head causing distal common bile duct (CBD) obstruction with superior mesenteric vein and superior mesenteric artery encasement (▶ Fig. 1).

The man underwent endoscopic retrograde cholangiopancreatography (ERCP), but we could not pass the duodenoscope because of tumor invasion. Therefore, a self-expandable metallic stent (SEMS) (Wallstent TM; Boston Scientific, Maryland, USA) was inserted. He underwent ERCP 2 weeks later but the ampulla was obscured. Therefore, endoscopic ultrasound (EUS) was considered for internal biliary drainage. The EUS showed a complex mass, 5.2 × 3.3 cm, at the pancreatic head, and the CBD was 2.05 cm (▶ Fig. 2).

After EUS-guided cholangiography, tailor-made Teflon dilators – 7 and 8.5 Fr – were used for dilation over the wire (▶ Figs. 3 and 4).

Then an 8.5 Fr × 6.5 cm tailor-made tapered-tip plastic stent, with multiple fangs but without a side hole, was inserted, and gave satisfactory drainage (▶ Figs. 5 and 6).

The patient was discharged without any complications. He was scheduled for SEMS insertion 4 months later.

In advanced pancreatic cancer, such as this case, percutaneous transhepatic biliary drainage (PTBD) and surgical drainage are the alternative options. PTBD is reported to have a higher complication rate of 10%–30%, while surgery is associated with a 2%–5% mortality and 17%–37% morbidity [1]. Even though EUS-guided biliary drainage was reported to be the safe and feasible procedure [2,3], it is not widely used because it requires more-advanced endoscopic skills. Possible complications of the EUS-guided biliary drainage, for example bile leakage and pneumoperitoneum, have also been reported. We minimized the leakage in this case by using a dilator instead of a needle knife or balloon dilation. We made the plastic stent ourselves instead of using a commercial one to make stent insertion easi-



Fig. 1 Computed tomography (CT) scan showing pancreatic mass at head and common bile duct, and pancreatic duct dilatation.



Fig. 2 Endoscopic ultrasound showed the common bile duct, 2.05 cm.

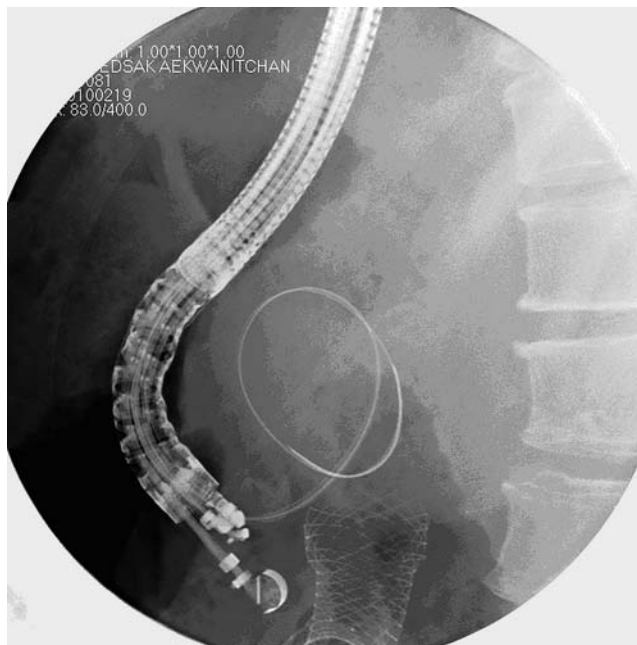


Fig. 3 Dilatation of the common bile duct.

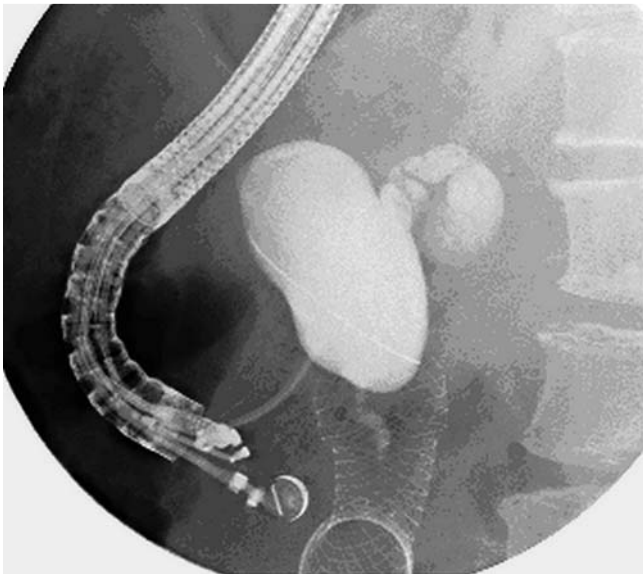


Fig. 4 Cholangiogram.



Fig. 5 Our tailormade tapered-tip plastic stent with multiple fangs and no side hole.



Fig. 6 After stent insertion.

er, prevent bile leakage, and prevent CBD injury during stent insertion. Our idea of multiple fangs without a side-hole was to prevent stent migration and early clogging.

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Competing interests: None

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