A 57-year-old man with alcohol-related chronic pancreatitis presented to us with a history of repeated endoscopic pancreatic duct (PD) stent placement over 2 years. At the last instance of ERCP for stent replacement, during stent removal, the stent fragmented at the site of PD stenosis, and 1 stent fragment migrated proximally.

Because all attempts to remove the fragment by the transpapillary approach with the use of various accessories such as forceps, snare, balloon, and basket, were unsuccessful (Fig. 1), we recommended surgical removal of the migrated stent fragment. However, because the patient was asymptomatic and his blood tests revealed normal serum amylase levels, and owing to an absence of inflammatory response, he refused consent for surgical intervention and was discharged with the stent fragment in situ.

Four months later, he was readmitted with a diagnosis of acute-on-chronic pancreatitis and cholecystitis (Fig. 2). At endoscopy, the duodenum could not be passed owing to acute inflammatory edema. Therefore, EUS-guided PD stenting through the stomach (pancreaticogastrostomy) was performed (Video 1, available online at www.VideoGIE.org). Transgastric puncture of the PD was performed with a 19-gauge needle (Fig. 3).

Although the PD diameter at the puncture site was only 1.8 mm, access was achieved with a single puncture. A 0.025-inch guidewire was advanced into the PD and then across the papilla into the duodenum. Dilation was attempted with an electrocautery catheter but was inadequate owing to the hard consistency of the pancreatic parenchyma. We achieved preliminary drainage with a 5F nasal indwelling drainage catheter (Fig. 4).

Figure 1. ERCP view showing proximally migrated stent fragment and multiple pancreatic duct stenoses (arrows).

Figure 2. CT image at the patient’s readmission for acute-on-chronic pancreatitis and cholecystitis. The stent fragment is visible within the inflamed pancreas.
Two weeks later, the catheter was replaced with a fully covered self-expandable metallic stent (SEMS) (8-mm × 12-cm, Bonastent, Standard Sci Tech, Seoul, Korea) (Fig. 5). The SEMS was placed in parallel with the stent fragment to facilitate dilation of the multiple main PD stenosis (Fig. 6).

Transpapillary PD stent fragment removal was attempted again, after the resolution of pancreatitis. First, the SEMS was removed to improve access to the stent fragment. A guidewire was successfully inserted into the stent fragment, and removal was attempted with a Soehendra stent retriever (Wilson Cook Medical, Winston-Salem, NC). The procedure was difficult because of the downstream PD stenosis, which dislodged the grip. While the stent fragment was pulled toward the papilla, the guidewire was advanced into the stomach through
the pancreaticogastric fistula. Subsequently, the stent fragment was successfully maneuvered into the stomach across the pancreaticogastric fistula by pushing the Soehendra stent retriever along the guidewire (Figs. 7 and 8).

Two retrospective studies have described the removal of proximally migrated PD stents and have reported success rates of endoscopic stent removal of 78% (26 of 33) and 76.9% (20 of 26), respectively.\(^1\),\(^2\) Most of these stents may be retrieved by the use of basket or balloon catheters. However, failure rates are high in the presence of stent fractures and downstream PD stenosis.\(^3\)

Removal of a PD stent from a fistula created by using EUS-guided pancreaticogastrostomy has not been previously reported. This may be a useful salvage technique in similar situations and may help in avoiding surgical treatment.

**DISCLOSURE**

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Abbreviations: PD, pancreatic duct; SEMS, self-expandable metallic stent.

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