Endoscopic retrieval of a migrated pancreatic stent under direct pancreatoscopy by use of a “snare over in-stent wire guide” method

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After ERCP, proximal migration of the pancreatic stent is an uncommon adverse event, and its management can be technically challenging. The authors report a case of endoscopic retrieval of a migrated, double-flanged, pancreatic stent (5F × 7 cm) under direct pancreatoscopy by use of a “snare over in-stent wire guide” method (Video 1, available online at www.VideoGIE.org).

Five years previously, a 46-year-old man with recurrent pancreatitis had undergone ERCP. The main pancreatic duct (PD) was dilated throughout. After a pancreatic sphincterotomy, a 5F × 7-cm double-flanged straight pancreatic stent was inserted for post-ERCP pancreatitis prophylaxis. One month later, the patient underwent an upper endoscopy for stent removal. The endoscopist did not visualize the stent endoscopically and thought it had dislodged. However, the stent had migrated into the pancreas.

The patient did well for 5 years without a further attack of pancreatitis. Unfortunately, the migrated stent was seen inside the pancreas on CT scan (Fig. 1) after the patient

Figure 1. CT view showing migrated stent inside the pancreas.

Figure 2. Fluoroscopic image showing the attempt to cannulate the stent with a guidewire.

Figure 3. Direct pancreatoscopic image of the migrated plastic stent.

Written transcript of the video audio is available online at www.VideoGIE.org.
experienced another episode of acute pancreatitis. During ERCP, all attempts to retrieve the stent with balloon, snares, and forceps were unsuccessful. Under fluoroscopy, guidewire cannulation of the stent also failed (Fig. 2). Then, we performed direct pancreatoscopy using SpyGlass (Boston Scientific, Natick, Mass, USA). A mild duct stricture at the neck of the PD was seen. After it was dilated with a 6-mm × 4-cm balloon, the pancreatoscope was advanced into the pancreatic body. The distal end of the stent was seen (Fig. 3). The rest of the main duct appeared normal despite the presence of the indwelling stent for 5 years.

The authors successfully cannulated the stent with a 0.035-inch guidewire (Fig. 4) through the Spyscope’s biopsy channel. A minisnare was advanced into the proximal PD over the guidewire. The stent was grasped and removed successfully (Figs. 5 and 6).

Proximal migration of a pancreatic stent is an uncommon adverse event that occurs in up to 5.2% of patients, but its management can be technically challenging because of the small PD diameter, the bent course of the PD, the presence of PD strictures, and the lack of suitable devices for stent removal. Because of the PD diameter, the use of devices that open (forceps, basket, or snare) is difficult when there is insufficient space in the main PD, especially if the stent is farther away from the stricture. Under fluoroscopy, it is also difficult for these devices to catch the stent.

Traditional endoscopic retrieval techniques have a success rate of 87%. Stent removal procedures carry a potential risk of damage to the pancreatic duct, which may lead to postprocedure pancreatitis. In this case, routine endoscopic techniques failed to retrieve the stent. SpyGlass pancreatoscopy facilitated successful guidewire cannulation of migrated stent and removal of the stent by use of a “snare over in-stent wire guide” method. It provides a new method to solve this problem. Under direct pancreatoscope observation, it also does less damage to the pancreas.
DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

Abbreviation: PD, pancreatic duct.

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