Endoscopic ultrasound-guided pancreaticogastrostomy reconstruction

Severe stenosis and obstruction of a pancreaticogastrostomy anastomosis sometimes occurs after surgical pancreatic resection and pancreaticogastrostomy, resulting in abdominal pain and aggravation of diabetes as a result of ductal hypertension [1]. Endoscopic ultrasound (EUS)-guided pancreaticogastrostomy has been reported as a method for reducing ductal hypertension in patients with chronic pancreatitis. We report a patient who underwent EUS-guided reconstruction of a pancreaticogastrostomy with gastropancreatic stent placement, which rapidly improved his symptoms [2, 3].

A 65-year-old man who had a branch duct type of intrapancreatic mucinous neoplasm (IPMN) (Figure 1) underwent a duodenum-preserving pancreatic head resection and pancreaticogastrostomy anastomosis. Forty-five days later, he developed a pancreatic pseudocyst (Figure 2), which was drained under EUS guidance. Although computed tomography 6 months later showed that the pseudocyst had disappeared, the scan showed dilatation of the main pancreatic duct (Figure 3). Decompression of the pancreatic duct was required to relieve his abdominal pain and reduce his hyperglycemia. Because the main pancreatic duct could not be drained by endoscopic retrograde pancreatography, EUS-guided pancreaticogastrostomy reconstruction was performed. An echo endoscope (GF-UC240 P-ALS; Olympus, Tokyo, Japan) was introduced into the stomach, and a 19-gauge needle (Echo-Tip; Wilson-Cook, Winston-Salem, North Carolina, USA) was used to puncture the main pancreatic duct and create a gastropancreatic fistula. We initially attempted to pass a 0.035-inch guide wire (Microvasive Endoscopy, Boston Scientific Corporation, Natick, Massachusetts, USA) through the stenotic anastomosis, but the guide wire could not be passed through the anastomosis (Figure 4). A 6-Fr (Soehendra Biliary Dilation Catheters, Wilson-Cook, Winston-Salem, North Carolina, USA) dilator was advanced over the guide wire to dilate the gastropancreatic fistula, and then a 5-Fr, 5-cm-long pancreatic stent (Geenen Pancreatic Stent Set, Wilson-Cook, Winston-Salem, North Carolina, USA) was advanced over the wire and through the gastropancreatic fistula. The stent was placed in the pancreatic duct with the tip positioned in the proximal duct (Figure 5, Figure 6). The patient's abdominal pain was rapidly relieved and his hyperglycemia had improved 1 month later.

Figure 1 Magnetic resonance cholangiopancreatographic view showing the dilated branch of the pancreatic duct and a mural nodule in the dilated duct (arrow).

Figure 2 Computed tomographic view showing a pancreatic pseudocyst that developed 3 months after the surgical resection and pancreaticogastrostomy.

Figure 3 Computed tomographic view, showing the dilated main pancreatic duct 6 months after drainage of the pancreatic pseudocyst.

Figure 4 Fluoroscopic image showing a guide wire in the dilated duct, complete obstruction of proximal duct, outflow of the contrast through the cystogastrostomy stent, and placement of a guide wire into the distal pancreatic duct. The arrows show the previous drainage stent of the pancreatic pseudocyst.

Figure 5 Endoscopic view of the stent inserted into the pancreatic duct.

Figure 6 Fluoroscopic image showing placement of the stent through the gastropancreatic fistula (arrows). The tip of the stent was positioned in the proximal duct.

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References

Bibliography
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