Endoscopic ultrasound-guided hepaticogastrostomy combined with gastroenterostomy in a case of complete duodenal obstruction

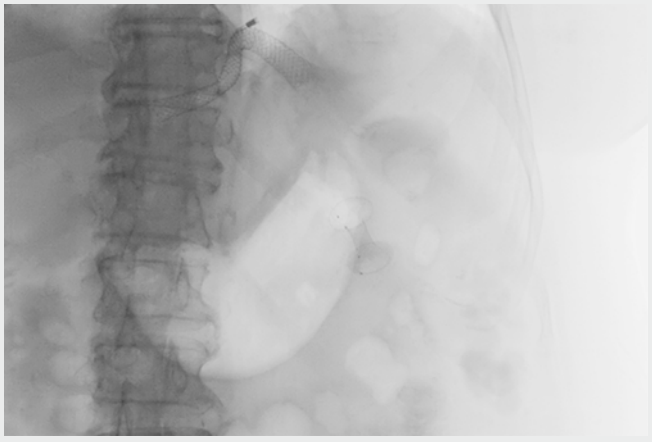
We report a successful case of hepaticogastrostomy combined with gastroenterostomy guided by endoscopic ultrasound (EUS) in a patient with unresectable carcinoma of the pancreatic head.

A 70-year-old woman presented with jaundice and vomiting for 3 weeks because of carcinoma of the pancreatic head. Attempts to implant a conventional intraluminal stent had failed three times owing to duodenal complete obstruction (twice at the previous hospital and once at our hospital). Therefore, we attempted EUS-guided hepaticogastrostomy and gastroenterostomy.

Because of poor function of the liver and disordered coagulation, we firstly performed hepaticogastrostomy as follows: (1) the intrahepatic bile duct (B3) was punctured with a 19-gauge needle; (2) a 0.035-inch guidewire was inserted; (3) the path was dilated with a 6-Fr cystotome; (4) a fully covered metal stent was implanted (▶ **Video 1**, part 1); and (5) a gastric tube was placed for external bile drainage. After 5 days, we performed a gastroenterostomy as follows: (1) following puncture, a 0.035-inch guidewire was inserted into jejunum; (2) enough saline was injected to display the proximal jejunum; and (3) a double-flanged fully covered metal stent with a cautery tip was implanted (▶ **Video 1**, part 2).

The stents functioned well until the patient developed vomiting in the third month after the operation. A computed tomography (CT) scan showed that the flange of the stent in the stomach had migrated. We implanted a new stent successfully, but the patient died owing to cerebral infarction a few days later.

To the best of our knowledge, this is the first report of hepaticogastrostomy combined with gastroenterostomy in a case of complete duodenal obstruction. Compared with previous reports [1, 2], the completely obstructed duodenum in the present case significantly increased the difficulty of the gastroenterostomy procedure, as it prevented the use of a balloon catheter or ultrafine gastroscope. Hepaticogastrostomy combined with gastroenterostomy produced a satisfactory effect, but the migration of the fully covered stent should be noted and any necessary intervention should be performed promptly [3 – 5].



Video 1 Endoscopic ultrasound-guided hepaticogastrostomy combined with gastroenterostomy for complete duodenal obstruction.

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Competing interests

The authors declare that they have no conflict of interest.

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