

## Endoscopic ultrasonography-guided double-balloon-occluded gastrojejunostomy bypass (EPASS) for malignant gastric outlet obstruction

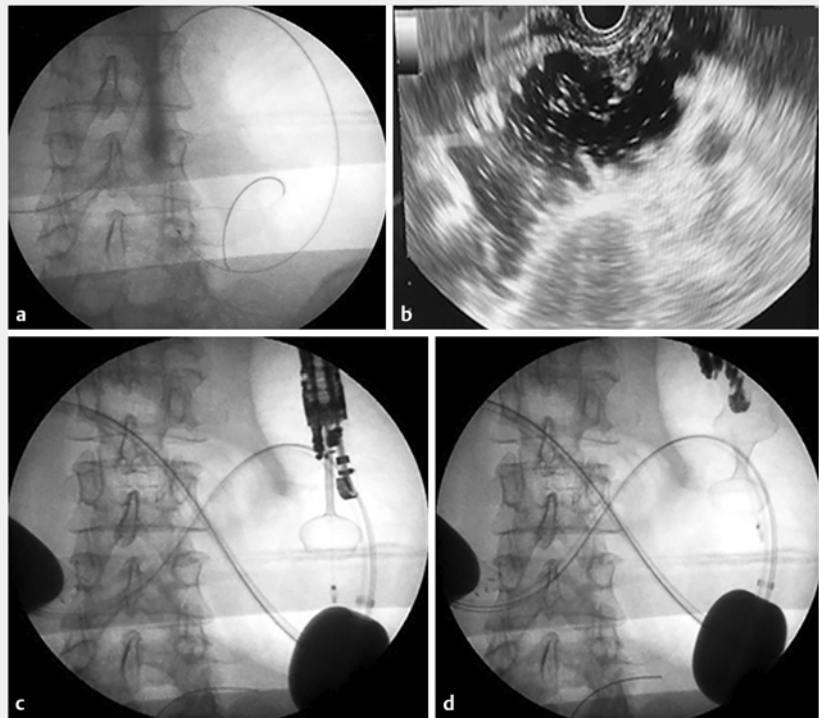
Our patient, a 58-year-old woman, was being followed-up for ulcerative colitis. Computed tomography (CT) showed the presence of a pancreatic nodule, which after endoscopic ultrasonography (EUS)-guided puncture and biopsy was diagnosed as pancreatic head adenocarcinoma. The patient developed jaundice and acute cholangitis, and biliary drainage by endoscopic retrograde cholangiopancreatography was carried out.

One month later, the disease had progressed, with duodenal invasion and obstructive symptoms. Endoscopic palliation of the obstructive symptoms was opted for with EUS-guided double-balloon-occluded gastrojejunostomy bypass (EPASS) using a unique double-balloon tube (Tokyo Medical University type; Create Medic, Yokohama, Japan) and a novel electrocautery-tipped stent delivery system equipped with a lumen-apposing metal stent (Hot Axios stent; Boston Scientific, Marlborough, Massachusetts, USA) (► **Fig. 1**). At follow-up, the patient presented good resolution of the obstructive symptoms and was referred for continuation of chemotherapy (► **Video 1**).

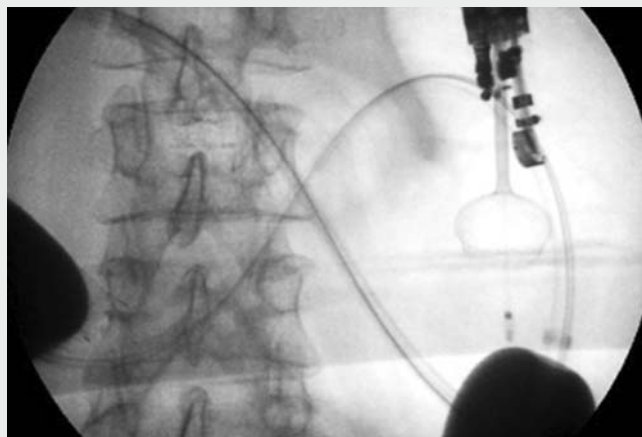
Surgical gastrojejunostomy, which has been the standard palliative treatment for malignant obstruction of the gastric outlet, is associated with good functional outcome and long-term relief of symptoms [1,2]. Endoscopic placement of a metal stent has been gaining popularity as an alternative to surgical gastrojejunostomy to treat malignant obstruction of the gastric outlet, because of its high technical success rates and lower degree of invasiveness [3].

To sum up, we established the feasibility of an EUS-guided gastrojejunostomy technique using a unique double-balloon tube and a novel electrocautery-tipped stent delivery system equipped with a lumen-apposing metal stent.

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► **Fig. 1** a–d Procedure for endoscopic ultrasonography (EUS)-guided double-balloon-occluded gastrojejunostomy bypass (EPASS). **a** The guidewire is positioned. **b** EUS shows a distended jejunum. **c** Endoscopic imaging shows the distal flange of the biflanged lumen-apposing metal stent in the jejunum. **d** Stent in place between the stomach and the jejunum.





► **Video 1** Endoscopic ultrasonography-guided double-balloon-occluded gastrojejunostomy bypass (EPASS) for malignant gastric outlet obstruction.

## Competing interests

The authors declare that they have no conflict of interest.

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