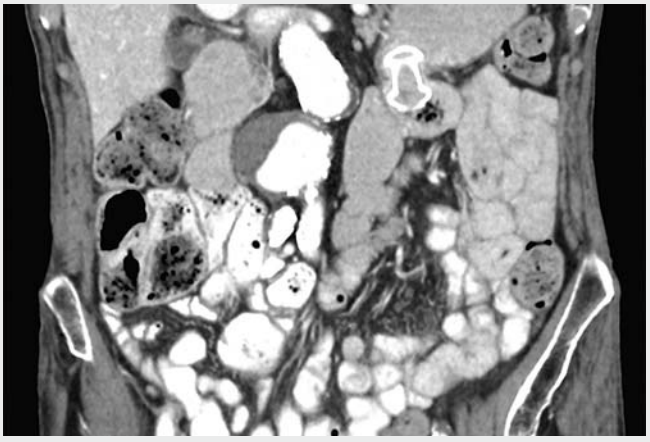
Treatment of aortoduodenal syndrome with endoscopic ultrasound-guided gastroenterostomy

▶ **Fig. 1** Computed tomography scan showing the aortic aneurysm, distended stomach, and duodenal obstruction.



Video 1 Endoscopic treatment of aortoduodenal syndrome.

Aortoduodenal syndrome is a very rare condition characterized by nausea, vomiting, abdominal pain, malnourishment, and weight loss. Aortoduodenal syndrome is caused by an upper gastrointestinal obstruction due to an abdominal aortic aneurysm. Most patients are treated with open surgery with abdominal aortic aneurysm repair and gastroenteral anastomosis or endovascular therapy [1–3]. Endoscopic ultrasound (EUS)-guided gastrojejunostomy with lumen-apposing metallic stents (LAMS) is a technique to create a fistula between the stomach and the jejunum to relieve symptoms in case of gastric outlet obstruction. We describe the first case of aortoduodenal syndrome managed endoscopically with EUS-guided gastroenterostomy.

The patient is an 80-year-old man with severely generalized arteriosclerosis, chronic obstructive pulmonary disease GOLD III with home oxygen treatment, and an abdominal aortic aneurysm measuring 56 mm in diameter (▶ **Fig. 1**). Twelve months prior to consultation, he had been admitted several times with respiratory failure and aspiration pneumonia. His complaints were constant satiety, nausea, abdominal pain, vomiting, and weight loss. Computed tomography (CT) scan revealed severe gastric and duodenal retention and enlargement of the horizontal duodenum, where an infrarenal abdominal aortic aneurysm caused compression of the bowel. The patient was deemed unfit for surgery. A nasoenteral tube was initially placed for decompression of the stomach after we observed clinical improvement. After consent, we performed an EUS-guided gastroenterostomy with a 15 mm LAMS (Hot Axios; Boston Scientific, Marlborough, Massachusetts, USA) using a free-hand technique. The procedure lasted 30 min under general anesthesia. The patient was able to start on liquid fluids after 24 hours. His condition gradually improved, and he was discharged after 3 days. During 15 months of follow-up, the patient experienced neither aspiration pneumonia nor a relapse of respiration failure. A CT scan of the abdomen 9 months after EUS-guided gastroenterostomy showed normalization of the gastric and duodenal distention. This is the first known case of aortoduodenal syndrome that has been treated endoscopically, and it demonstrates that EUS-guided gastroenterostomy may be an option for treating patients with aortoduodenal syndrome who are unfit for surgery.

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Competing interests

The authors declare that they have no conflict of interest.

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