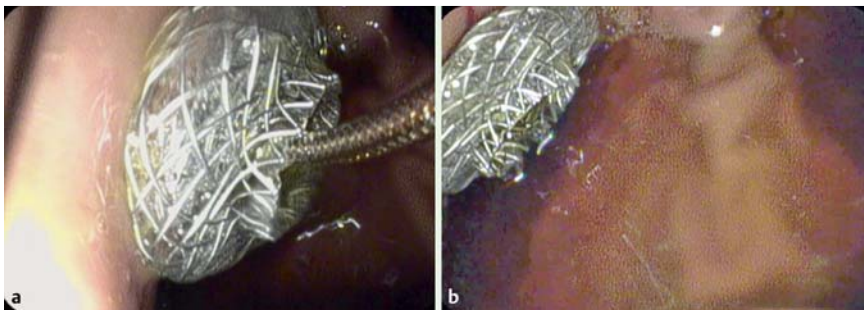
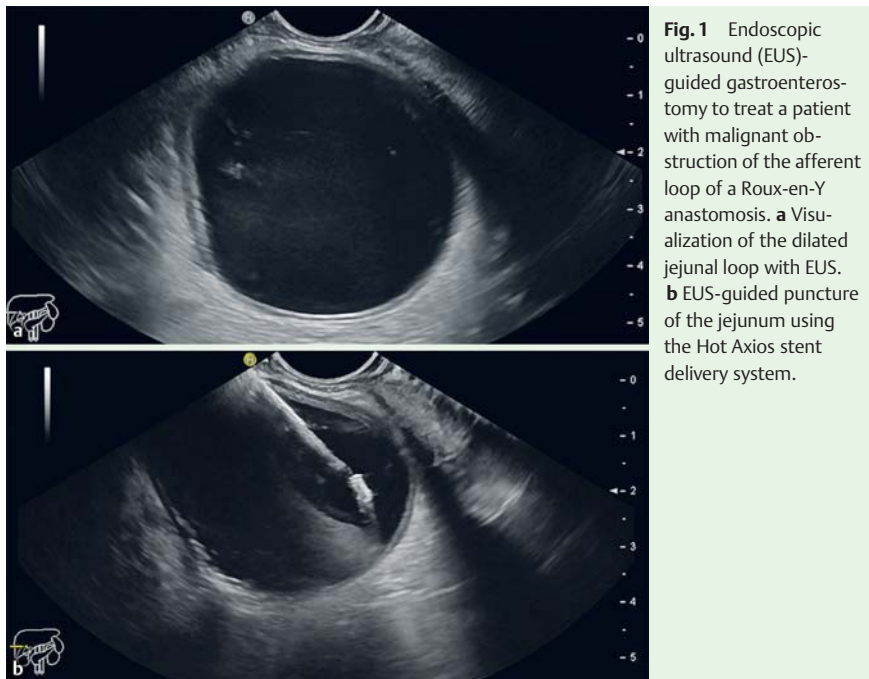


Gastric outlet obstruction syndrome due to an obstructed hepaticojejunostomy loop treated by one-step endoscopic ultrasound-guided gastroenterostomy



Endoscopic ultrasound (EUS)-guided gastroenterostomy is an experimental procedure that is emerging as a minimally invasive alternative to surgical bypass and to luminal endoscopic stent placement [1,2]. We report successful treatment of a 50-year-old woman who was referred with malignant obstruction of the afferent loop of a Roux-en-Y anastomosis due to local recurrence of cholangiocarcinoma following an earlier pancreaticoduodenectomy. Because the severely dilated afferent loop was compressing the stomach, sufficient nutrition was impossible. Additionally, the patient was jaundiced because of extrahepatic biliary obstruction.

A percutaneous transhepatic metal stent was inserted to relieve the jaundice, but after several unsuccessful attempts to place self-expandable stents through the afferent loop stenosis, we decided to perform an EUS-guided gastroenterostomy using a linear-scanning echoendoscope (Pentax EG-3870UTK; Tokyo, Japan) and the Hot Axios stent system (Hot Axios; Xlumena, Mountain View, California, USA). After the dilated jejunal loop was visualized by EUS, the distal end of the stent delivery system was inserted through the stomach wall into the jejunal lumen by applying electrocautery (► **Fig. 1a,b**, ► **Video 1**). The lumen-apposing stent was then deployed resulting in immediate flow of fluid from the obstructed jejunal loop into the stomach. Fluoroscopy was not performed since correct placement could be confirmed by EUS and direct view of the jejunal lumen (► **Fig. 2a,b**, ► **Video 2**). Following the procedure, the patient's symptoms resolved and enteral feeding was reinstated (► **Fig. 3**). No adverse events were observed during a 30-day follow-up period.

Currently, two case series and several case reports have been published describing different methods such as the double-balloon technique and water infusion [2–5]. In patients with afferent loop obstruction, direct EUS-guided gastroenterostomy without the use of fluoroscopy or other adjuncts can safely be performed since the dilated jejunal loop is filled with fluids, but further research is warranted before large-scale clinical implementation.

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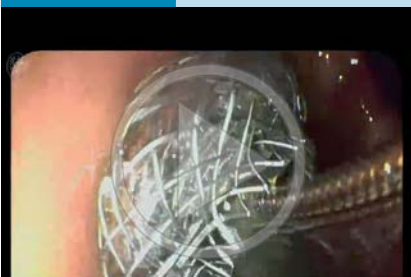
Competing interests: None

Video 1



Endoscopic ultrasound (EUS)-guided gastroenterostomy: puncture of the jejunum.

Video 2



Deployment of the lumen-apposing stent as seen with gastroscopy. Fluids are flowing from the jejunal loop into the stomach.

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