Duodenal stump fistula following Roux-en-Y gastrectomy, treated with single-balloon enteroscopy using the tulip bundle technique and fibrin glue injection

In January 2012, a 68-year-old woman underwent laparoscopic partial gastrectomy at our institute, with Roux-en-Y reconstruction for an ulcerated gastrointestinal stromal tumor. The postoperative course was complicated by development of a duodenal stump fistula and submucosal tumor. The patient underwent laparoscopic partial gastrectomy with Roux-en-Y reconstruction for an ulcerated gastrointestinal stromal tumor.

Endoscopic view of the orifice of the fistula.

Fig. 1 Percutaneous cholangiography showing a duodenal stump fistula (black arrow) in a 68-year-old woman who underwent laparoscopic partial gastrectomy with Roux-en-Y reconstruction for an ulcerated gastrointestinal stromal tumor.

Fig. 2 Endoscopic view of the orifice of the fistula.

In January 2012, a 68-year-old woman underwent laparoscopic partial gastrectomy at our institute, with Roux-en-Y reconstruction for an ulcerated gastrointestinal stromal tumor. The postoperative course was complicated by development of a duodenal stump fistula and submucosal tumor. The patient underwent laparoscopic partial gastrectomy with Roux-en-Y reconstruction for an ulcerated gastrointestinal stromal tumor. Informed consent was obtained from the patient.

Single-balloon enteroscopy was carried out with a high resolution enteroscope (SIF-Q180; Olympus America, Center Valley, Pennsylvania, USA) and a disposable sliding overtube (ST-SB1; Olympus America) and a disposable overtube (SIF-Q180; Olympus America, Center Valley, Pennsylvania, USA) were placed over the endoclips, near the base, to fully close the fistula. We then injected 4mL of fibrin glue (Beriplast-P Combi-Set; CSL Behring, Marburg, Germany) into the submucosa to ensure complete sealing of the fistula. Definitive fistula closure was clinically and radiologically observed at the 2 months’ follow-up.

Duodenal stump fistula after gastrectomy is a potentially devastating complication, with high morbidity, long period of hospitalization, and an overall mortality rate of about 20% (due to sepsis and multiple organ failure) [3]. Treatment with PTBD and an occlusion balloon in the biliary tree has been described [4, 5]. This report describes a new endoscopic treatment for a refractory duodenal stump fistula and illustrates the feasibility and usefulness of interventional single-balloon enteroscopy. In conclusion, we believe that in the case of a life-threatening complication in the small intestine which is difficult to access, single-balloon enteroscopy may be a viable alternative to surgical intervention.

Competing interests: None

G. Curcio1, R. Badas1, R. Miraglia2, L. Barresi1, I. Tarantino1, M. Traina1
1 Department of Gastrointestinal Endoscopy, Mediterranean Institute for Transplantation and Advanced Specialized Therapies (IsMeTT), Palermo, Italy
2 Department of Radiology, Mediterranean Institute for Transplantation and Advanced Specialized Therapies (IsMeTT), Palermo, Italy

References
2 Curcio G, Traina M, Panarello G et al. Refractory gastric ulcer bleeding treated with new endoloop/clips technique. Dig Endosc 2011; 23 (Suppl. 02): 203 – 204

Curcio G et al. Duodenal stump fistula... Endoscopy 2012; 44: E364–E365
Fig. 3  Endoscopic views: a–c Application of the tulip bundle technique and d after fibrin glue injection. e, f Radiological views at the end of the procedure, before and after contrast dye injection.

Fig. 4  Percutaneous cholangiography showing complete closure of the fistula.

Bibliography
DOI http://dx.doi.org/10.1055/s-0032-1310073
Endoscopy 2012; 44: E364–E365
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

Corresponding author
G. Curcio
Department of Gastrointestinal Endoscopy
IsMeTT, UPMC
Via Tricomi 1
Palermo 90127
Italy
Fax: +39-091-2192400
gcurcio@ismett.edu