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 consented to undergo single-balloon enteroscopy to access the afferent loop and reach the duodenal stump. From this procedure, a large, 2-cm orifice surrounded by hyperemic mucosa at the duodenal stump was observed. A high resolution enteroscope was used to initially position the single-balloon enteroscope to access the stump, and an occlusion balloon in the small intestine which is difficult to access, single-balloon enteroscopy may be a viable alternative to surgical intervention.
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.