Traction-assisted endoscopic submucosal dissection of a duodenal gastrointestinal stromal tumor

A 70-year-old woman with a gastric adenocarcinoma and a subepithelial lesion in the distal descending duodenum (▶ Fig. 1) was referred to us. On endoscopic ultrasound (EUS), a 15-mm hypoechoic, regular, and homogeneous lesion engaging the muscularis propria was observed (▶ Fig. 2). Histopathology analysis of the fine-needle biopsy showed a gastrointestinal stromal tumor (GIST) with a low proliferative index. After discussion in a multidisciplinary team conference and on patient consent, an endoscopic submucosal dissection (ESD) and gastrectomy were performed in the same session.

In order to facilitate access to the submucosa during ESD, we applied a traction system using a dental floss ring and two clips (▶ Fig. 3). This system enabled quick, safe, and complete resection with full control of the dissection plane (▶ Fig. 4, ▶ Video 1). The GIST was resected en bloc and the wall defect was fully closed using eight metallic clips and an endoloop (▶ Fig. 5). There were no adverse events during the procedure. Postoperatively, the patient developed mild abdominal pain, which was easily controlled with painkillers, and oral intake was restarted on day 3. The patient was re-admitted at 2 months owing to fever caused by a retroperitoneal fluid collection that was treated with antibiotherapy and EUS drainage; she remained asymptomatic at the 3-month follow-up.

ESD has been increasingly used for the treatment of duodenal epithelial [1] and subepithelial [2, 3] lesions. Endoscopic treatment of GISTs is controversial due to the need for complete resection and associated risks. Small series of gastric GIST ESD were described, but only few cases of GIST ESDs were reported [4] and none with this technique. Several traction devices may be used for ESD [5], but this GIST was located in the distal duodenum, precluding the use of most of them. This case also highlights the need for long and close follow-up of these patients.

Competing interests

The authors declare that they have no conflict of interest.
The authors

Francisco Baldaque-Silva, Naining Wang, Ioannis Rouvelas, Masami Omae

1 Division of Medicine, Department of Upper Gastrointestinal Diseases, Karolinska University Hospital and Karolinska Institute, Stockholm, Sweden
2 Department of Pathology, Karolinska University Hospital and Karolinska Institute, Stockholm, Sweden
3 Division of Surgery, Department of Clinical Science, Intervention and Technology (CLINTEC), Karolinska Institute, Stockholm, Sweden

Corresponding author

Francisco Baldaque-Silva, MD
Department of Upper Gastrointestinal Diseases, Karolinska University Hospital, Huddinge, 141 86 Stockholm, Sweden
fbaldaquesilva@gmail.com

References