Traction-assisted endoscopic submucosal dissection for a gastric lesion involving the pyloric ring and duodenal bulb

An 81-year-old woman underwent an upper gastrointestinal endoscopy because of anemia. Two lesions were detected: a 30-mm type 0-Ip located in the lesser curvature of the antrum, and a 25-mm type 0-IIs involving the upper hemisphere of the pylorus and the proximal duodenal bulb. Biopsy specimens revealed hyperplastic polyp and adenocarcinoma, respectively. Endoscopic submucosal dissection (ESD) was proposed (Video 1). The procedure was performed using an insulated-tipped knife (IT-knife 2; Olympus, Tokyo, Japan), with the patient under deep sedation. First, a submucosal injection on the distal part was performed and initial approach to the lesion from the duodenal bulb was attempted; however, neither the forward nor retroflexion view allowed a good endoscopic approach to the lesion. Therefore, clip traction was performed using dental floss, pulling the whole lesion into the gastric lumen (Fig. 1). ESD was accomplished from the distal to the proximal side (Fig. 2), achieving en bloc resection of both lesions on the same pathological specimen (Fig. 3). At the end of ESD, moderate bleeding was observed from two vessels in the scar, and five hemoclips were applied for successful hemostasis (Fig. 4). Major nonbleeding vessels were coagulated using Coagrasper Hemostatic Forceps (Olympus) to prevent delayed hemorrhage. The procedure time was 60 minutes. The patient did not develop complications and was discharged after 3 days. Histopathological examination revealed a hyperplastic polyp without dysplasia in the 30-mm lesion, and a moderately differentiated intramucosal adenocarcinoma, without lymphovascular invasion and with negative horizontal margins in the 25-mm lesion (expanded curative criteria). The pylorus and duodenal bulb have been reported among the most challenging locations for performing ESD, with a greater risk of complications [1–3]. The complete resection rate decreases for tumors that are located in the upper hemisphere, have duodenal extension, and have a large circumferential extent of resection [3]. Different traction systems have been developed to assist ESD.

Video 1 Traction-assisted endoscopic submucosal dissection for a gastric lesion involving the pyloric ring and duodenal bulb.

Fig. 1 Traction with dental floss and clip was performed from the duodenal part of the lesion.

Fig. 2 Endoscopic submucosal dissection was performed from the distal to the proximal side.

Fig. 3 En bloc resection was achieved for both lesions in the same pathological specimen.
Among them, dental floss and clip traction is a simple, feasible, and cost-effective method that allows the procedure time to be shortened while achieving en bloc resection [4, 5].

Endoscopy_UCTN_Code_TTT_1AO_2AN

Competing interests

None

The authors

Marta Rodríguez-Carrasco1, Gonçalo Nunes2, Diogo Libânio1,3, Pedro Pimentel-Nunes1,3,4, Mário Dinis-Ribeiro1,3

1 Gastroenterology Department, Portuguese Oncology Institute of Porto, Porto, Portugal
2 Gastroenterology Department, Hospital García de Orta, Almada, Portugal

References