Endoscopic full-thickness resection of esophagogastric junction gastrointestinal stromal tumor assisted by laparoscopy after neoadjuvant therapy

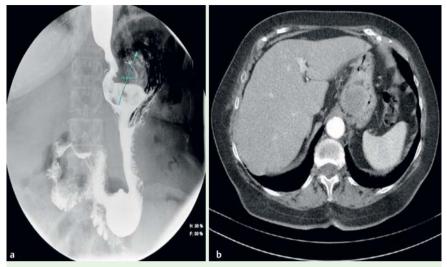


Fig.1 Gastrointestinal stromal tumor at the esophagogastric junction. **a** Double-contrast radiography. **b** Computed tomography.

Gastrointestinal stromal tumors (GISTs) are the most common mesenchymal neoplasms of the digestive tract [1]. Surgery is the only potentially curative therapy. However, some tumors are locally advanced, and therefore R0 resection cannot be guaranteed. In this situation, imatinib can allow organ-preserving surgery and optimal oncological outcome [2-5]. GISTs located at the esophagogastric junction (EGJ) are challenging because wedge resection is difficult to achieve, and gastrectomy and/or esophagectomy are associated with morbidity and mortality. Consequently, endoscopic resection could be an ideal alternative to surgery, with comparable oncological outcomes.

We present the case of an 82-year-old woman with a 1-month history of progressive dysphagia. An upper endoscopy showed a 6-cm pedunculated polypoid lesion at the EGJ, with a short and wide pedicle that protruded into the gastric fundus. The biopsy demonstrated a highrisk GIST with 20 mitoses per 50 high-

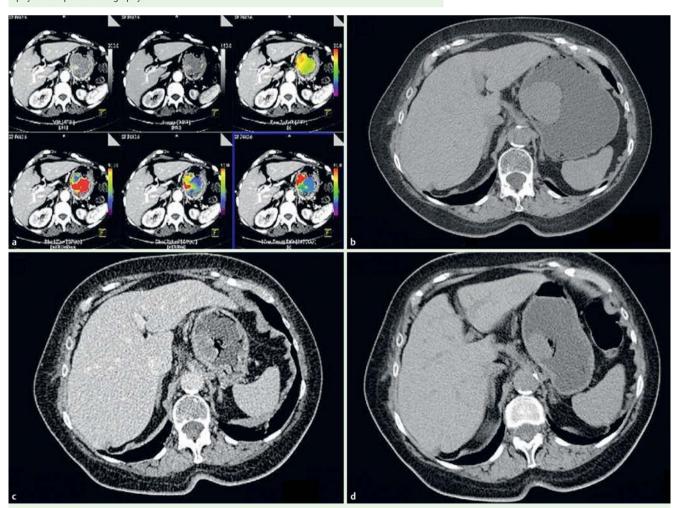


Fig.2 Computed tomography with perfusion. **a** Before neoadjuvant therapy with imatinib. **b** 1 week after treatment with imatinib. **c** 2 months after treatment. **d** 4 months after treatment. The size of the lesion decreased progressively.

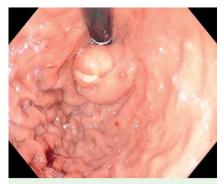
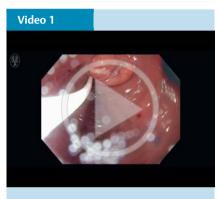
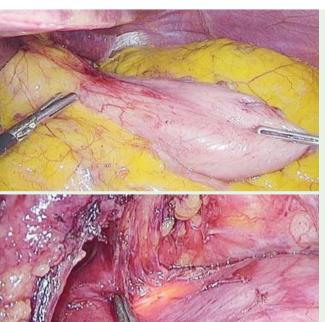


Fig. 3 Intraoperative endoscopic view in retroversion of the lesion at the esophagogastric junction.



The full-thickness endoscopic resection was performed using a diathermic snare with the support of the laparoscopic surgeon, who assisted the endoscopist by pushing the lesion inside the snare.





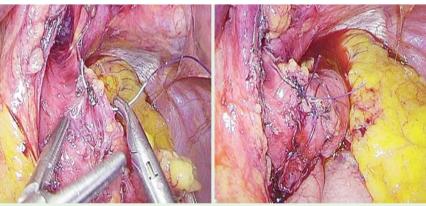


Fig. 5 Laparoscopic stitches were placed in the resected area to reinforce the tissue and to prevent delayed perforation.

power fields (HPF). Abdominal doublecontrast radiography and computed tomography (CT) scan ruled out metastasis (**•** Fig. 1). It was decided to treat the tumor with imatinib to decrease its size. A 6-month course of therapy was started. CT scans performed at 1 week, and at 2 and 4 months showed optimal response to treatment, with a decrease in size from 6.5 cm to 2.7 cm (**S** Fig. 2). Because of the patient's co-morbidities, an endoscopic resection with laparoscopic support was then performed (> Fig. 3). Briefly, the laparoscopic surgeon released the upper part of the lesser and greater curvature of the stomach for better mobilization

(**•** Fig. 4). The endoscopist completed the en bloc resection using a diathermic snare with the support of the laparoscopic surgeon, who pushed the lesion inside the snare, avoiding perforation (**> Video 1**). After resection, seroserosal stitches were applied by the laparoscopic surgeon to reinforce the resected area (**> Fig. 5**). The final histology showed a GIST of 3.8 cm with 1 mitosis per 50 HPF (low-risk lesion). After 6 months of follow-up, there was no recurrence.

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Competing interests: None

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Bibliography

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