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

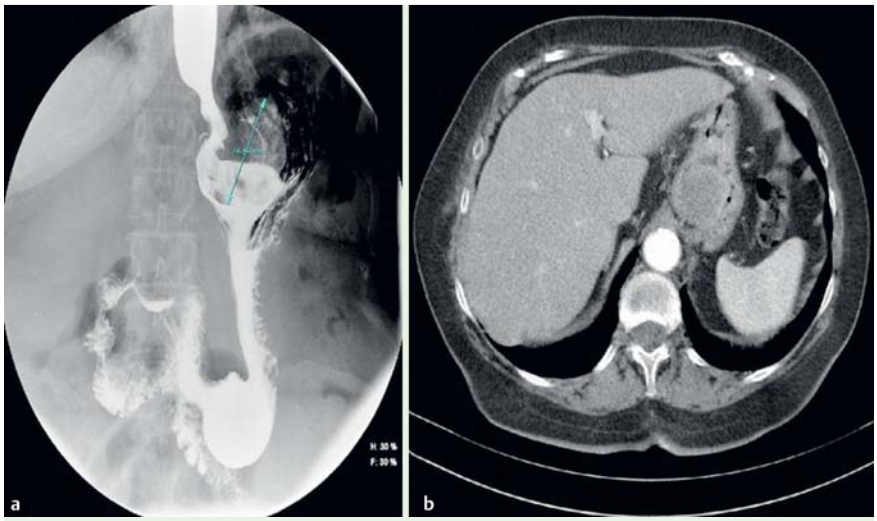


Fig. 1 Gastrointestinal stromal tumor at the esophagogastric junction. **a** Double-contrast radiography. **b** Computed tomography.

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 high-risk GIST with 20 mitoses per 50 high-

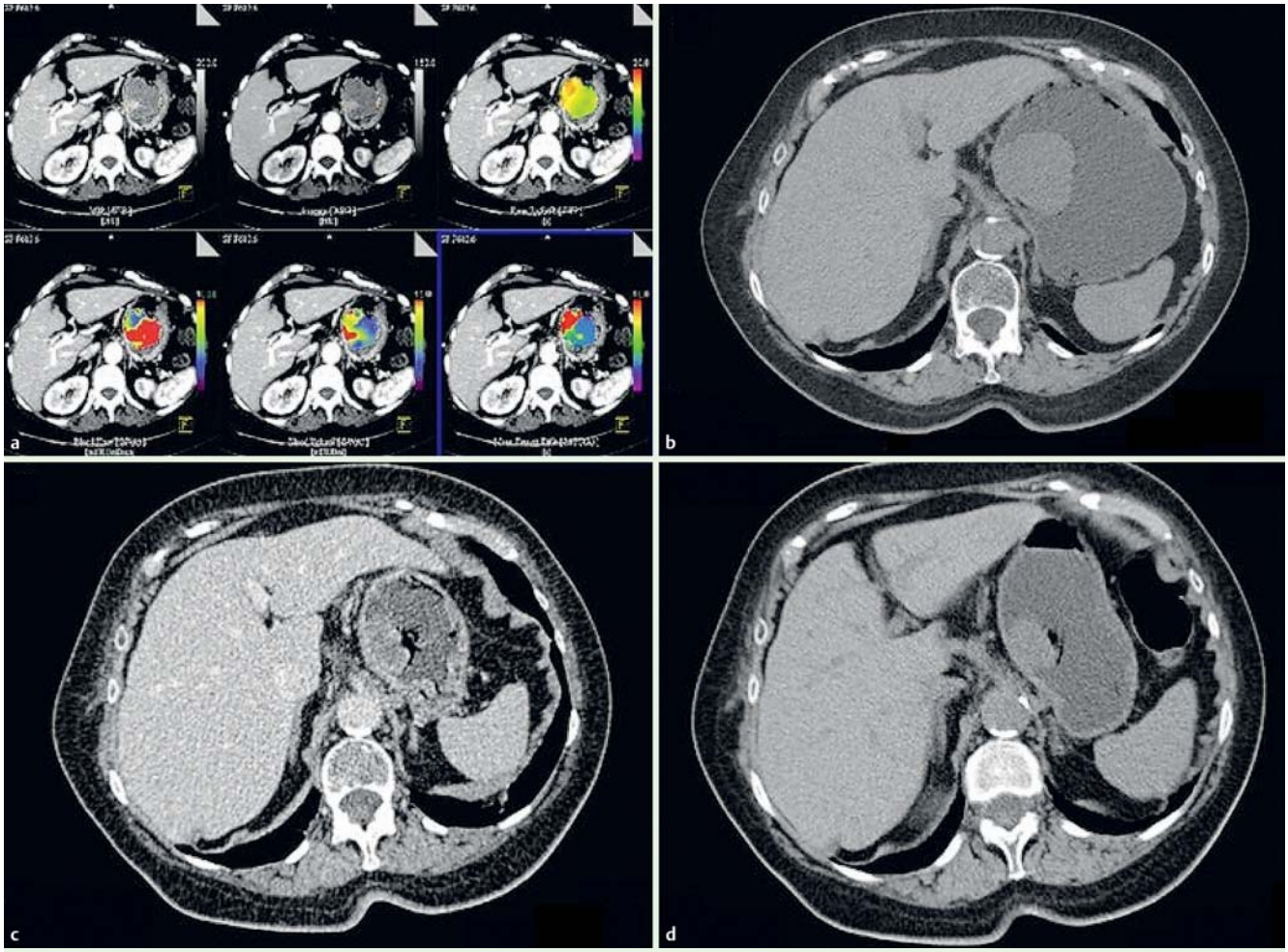


Fig. 2 Computed tomography with perfusion. **a** Before neoadjuvant therapy with imatinib. **b** 1 week after treatment with imatinib. **c** 2 months after treatment. **d** 4 months after treatment. The size of the lesion decreased progressively.

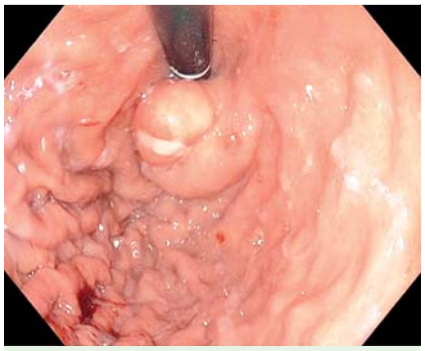
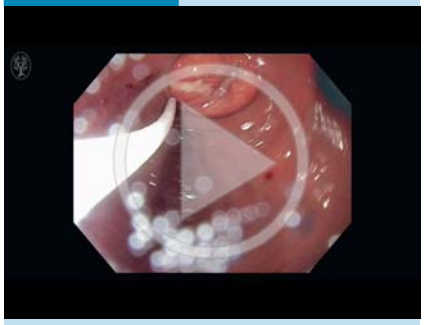
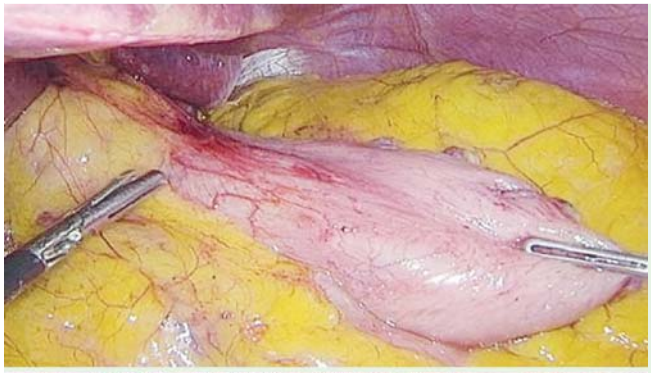


Fig. 3 Intraoperative endoscopic view in retroversion of the lesion at the esophagogastric junction.

Video 1



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.



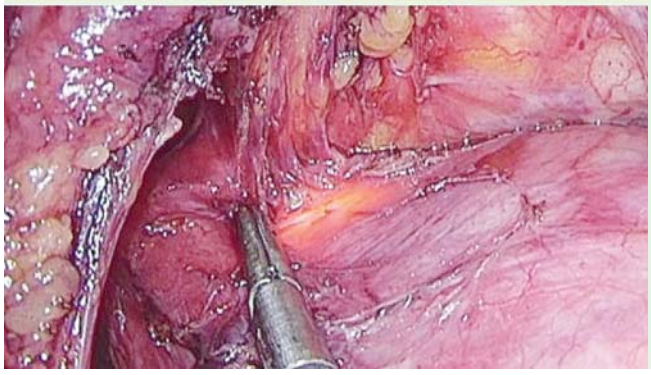


Fig. 4 Laparoscopic view showing the complete liberation of the upper part of the stomach for optimal mobilization of the esophagogastric junction.

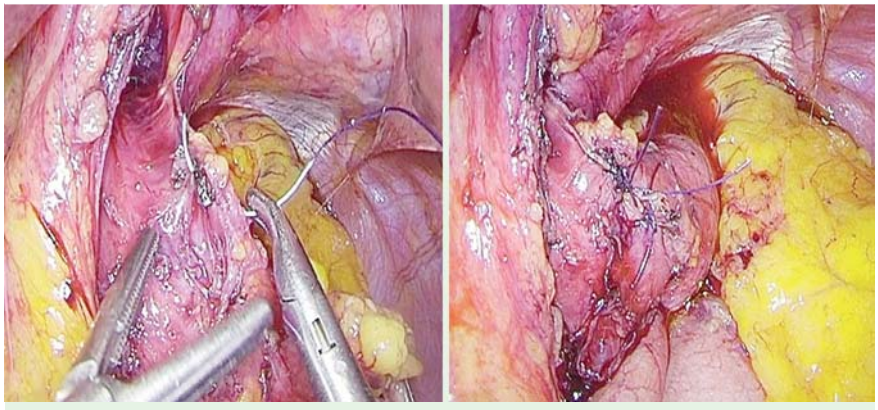


Fig. 5 Laparoscopic stitches were placed in the resected area to reinforce the tissue and to prevent delayed perforation.

power fields (HPF). Abdominal double-contrast 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 (**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.

Endoscopy_UCTN_Code_TTT_1AO_2AG

Competing interests: None

Andrés Navarrete[1,2,3], Dulce Momblan[1], Gloria Fernandez-Esparrach[4], Salvadora Delgado[1], Marta Jimenez[1], Amelia Hessheimer[1], Antonio M. Lacy[1]

[1] Gastrointestinal Surgery Department, Hospital Clinic, Barcelona, Spain
[2] Surgery Department, Faculty of Medicine Clínica Alemana Universidad del Desarrollo, Santiago, Chile
[3] Digestive Surgery Department, Hospital Militar, Santiago, Chile
[4] Endoscopy Department, Hospital Clinic, Barcelona, Spain

References

1 *Rutkowski P, Gronchi A, Hohenberger P* et al. Neoadjuvant imatinib in locally advanced gastrointestinal stromal tumors (GIST): he EORTC STBSG experience. Ann Surg Oncol 2013; 20: 2937 – 2943
2 *Verweij J, Casali P, Zalcberg J* et al. Progression-free survival in gastrointestinal stromal tumours with high-dose imatinib: randomised trial. Lancet 2004; 364: 1127 – 1134
3 *Van Oosterom A, Judson I, Verweij J* et al. Safety and efficacy of imatinib (STI571) in metastatic gastrointestinal stromal tumours: a phase I study. Lancet 2001; 358: 1421 – 1423
4 *Demetri G, Von Mehren M, Blanke C* et al. Efficacy and safety of imatinib mesylate in advanced gastrointestinal stromal tumors. N Engl J Med 2002; 347: 472 – 480
5 *Rankin C, Von Mehren M, Blanke C* et al. Dose effect of imatinib in patients with metastatic GIST – Phase III Sarcoma Group Study S0033 [Abstract]. J Clin Oncol 2004; 22: 9005

Bibliography

DOI http://dx.doi.org/10.1055/s-0042-104191
Endoscopy 2016; 48: E112–E114

ISSN 0013-726X

Corresponding author

Andrés Navarrete, MD
Gastrointestinal Surgery Department
Hospital Clinic
Aribau 159 3-1
Barcelona 08036
Spain
Fax: +34-93-2275400
andres_navarr38@hotmail.com