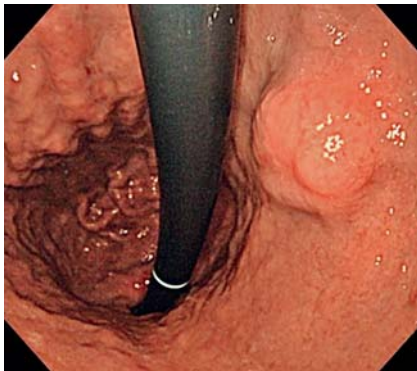


Endoscopic resection of a gastric gastrointestinal stromal tumor without perforation using a detachable snare

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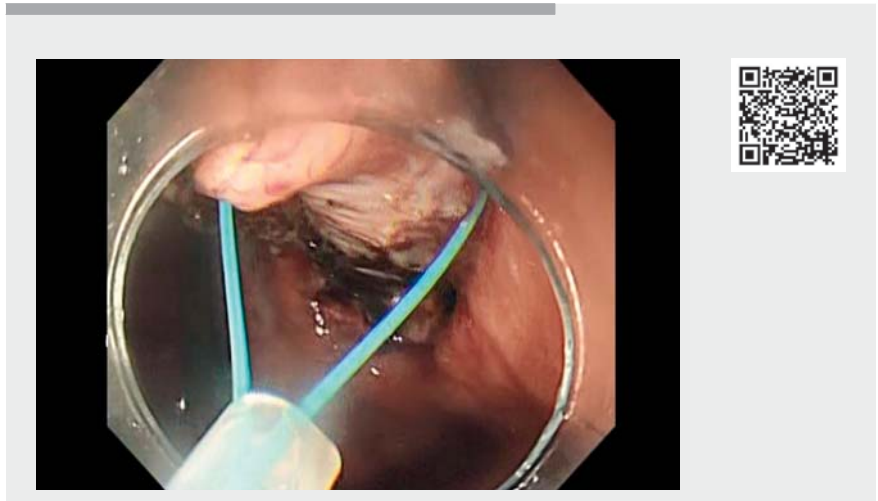


► **Fig. 1** Esophagogastroduodenoscopy image revealing a 10-mm submucosal tumor on the posterior wall of the middle gastric body.

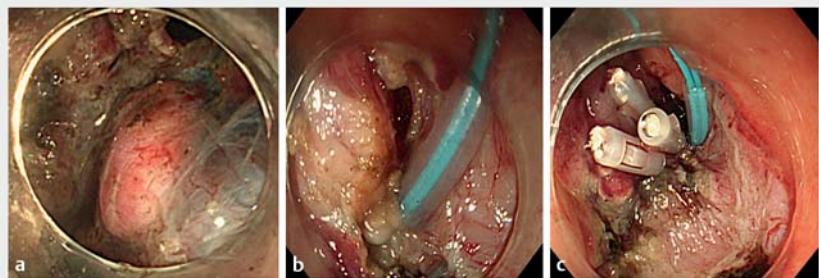
Resection of gastrointestinal stromal tumors (GISTs) by endoscopic submucosal dissection (ESD) has recently been reported [1,2]. However, when endoscopic resection is performed, a full-layer resection of the gastric wall is often necessary, and extensive suturing is required if perforation occurs. We report the case of a patient with a GIST that was completely resected safely and easily without perforation using the ESD technique in combination with a detachable snare.

The patient was an 83-year-old woman in whom routine esophagogastroduodenoscopy had revealed a 10-mm submucosal tumor on the posterior wall of the middle gastric body that appeared to be enlarging (► **Fig. 1**). A diagnosis of a GIST was made by boring biopsy.

The procedures used were performed using a GIF-H290 T endoscope (Olympus Medical Systems, Tokyo, Japan) with an attachment cap (► **Video 1**). First, the surrounding mucosa was incised using a DualKnife (Olympus Medical Systems) and the submucosa was dissected, revealing a yellowish submucosal tumor that was in continuity with the muscular layer (► **Fig. 2a**). The submucosa and some of the muscle layers were dissected as far as possible to expose the tumor



► **Video 1** Endoscopic submucosal dissection aided by a detachable snare is performed to remove a gastric tumor. After the submucosal layer has been dissected, the tumor is pulled with a threaded clip, the muscle layer is then inverted and strangulated with a detachable snare, before the tumor is safely and completely resected.



► **Fig. 2** Endoscopic views during endoscopic submucosal dissection showing: **a** the submucosa and some of the muscle layers after they had been dissected as far as possible; **b** incision of the upper part of the strangulated area by the detachable snare; **c** clips placed over the constricted areas to ensure complete closure.

without causing injury. Because we were mindful that further dissection would risk perforation, the tumor was then pulled with a threaded clip, the muscle layer was inverted, and it was possible to constrict the base with a detachable snare (► **Fig. 2b**). The upper part of the strangulated area was then incised and successfully resected en bloc in 90 minutes. The detachable snare was placed at

the resection site to bind the muscle layer so that it did not open. There was no obvious perforation, and the procedure was completed by placing an additional clip over the constricted area (► **Fig. 2c**).

The patient had no postoperative complications and was discharged on postoperative day 5. Pathology results showed complete resection of a low risk GIST. We have demonstrated that exces-


sive invasiveness can be avoided using this method in the endoscopic resection of a GIST.

Endoscopy_UCTN_Code_TTT_1AO_2AG

Competing interests

The authors declare that they have no conflict of interest.

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Endoscopy 2023; 55: E549–E550
 DOI 10.1055/a-2040-3802
 ISSN 0013-726X
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