Successful non-exposed endoscopic wall-inversion surgery for gastric stromal tumor and gastric ESD for dysplastic lesion during a single procedure

For gastrointestinal stromal tumors, the risk of lymph node metastasis is considered negligible and partial gastric resection without lymphadenectomy is accepted [1]. However, conventional gastric wall resections are associated with intentional perforation with a risk of bacterial contamination and tumor cell seeding into the peritoneum. To avoid this dissemination, non-exposed endoscopic wall-inversion surgery has been developed [2, 3] but never reproduced outside Japan [4].

We proposed such a procedure to a 57-year-old man for a 22-mm submucosal tumor of the fundus on the anterior wall close to the lesser curvature. Unfortunately, while surgeons were inserting the laparoscope, a small sessile gastric lesion with a depressed area on the top and an irregular mucosal pattern was detected just below the cardia during the endoscopy. To avoid cancelling the procedure, we performed an en bloc en-
endoscopic submucosal dissection (ESD) procedure of the lesion (▶Video 1), and then sent the specimen for extemporaneous pathology examination, which confirmed the lack of invasive adenocarcinoma. Non-exposed endoscopic wall-inversion surgery was pursued [2, 3] with circumferential marking (▶Fig. 1, ▶Fig. 2) and submucosal injection with blue saline; surgeons performed the muscular and submucosal incision laparoscopically. Then, two small pieces of sponge were placed against the tumor in order to cover the area with a suture of the gastric wall, pushing the lesion towards the gastric lumen. Once that step was complete without any gastric leakage, the mucosa and remaining submucosa were cut circumferentially by ESD using a DualKnife (Olympus, Tokyo, Japan). The full-thickness specimen was removed endoscopically. Patient resumed eating on day three after the lack of leakage was confirmed (gastric opacification) and was discharged on day five.

To summarize, non-exposed endoscopic wall-inversion surgery is an exciting technique combining endoscopy and laparoscopic surgery to remove gastric tumors without any periprocedural communication of the gastric lumen with the peritoneum, thus reducing the risk of cell seeding. This technique is reproducible outside Japan and seems minimally invasive.
Competing interests

The authors declare that they have no conflict of interest.

The authors

Arnaud Pasquer1, Gilles Poncet1, Florian Rostain2, Jérôme Rivory2, Valérie Hervieu3, Julie Périnel1, Mathieu Pioche2

1 Digestive Surgery Unit, Edouard Herriot Hospital, Hospices Civils de Lyon, Lyon, France
2 Endoscopy and Gastroenterology Unit, Edouard Herriot Hospital, Hospices Civils de Lyon, Lyon, France
3 Pathology Division, Hospices Civils de Lyon, Lyon, France

Corresponding author

Mathieu Pioche, MD
Endoscopy Unit – Digestive Disease Department, Pavillon L – Edouard Herriot Hospital, 69437 Lyon Cedex, France
mathieu.pioche@chu-lyon.fr

References


Bibliography

Endoscopy 2021; 53: E452–E454
DOI 10.1055/a-1324-2249
ISSN 0013-726X
published online 4.2.2021
© 2021. Thieme. All rights reserved.
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

ENDOSCOPY E-VIDEOS

Endoscopy E-Videos is a free access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online.

This section has its own submission website at https://mc.manuscriptcentral.com/e-videos