

Title:

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Preserved mucosa unroofing facilitated closure of a large gastric defect after endoscopic full-thickness resection

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Dear Editor,

A 58-year-old female was found to have a submucosal bulging lesion in the anterior wall of the gastric fundus during a screening esophagogastroscope. Endosonographic evaluation revealed it to be a 3.1 × 2.5 cm, hypoechoic mass originating from muscularis propria (MP) (Fig. 1A and B). Endoscopic full-thickness resection (EFR) was attempted. After submucosal injection, a four-fifth circumferential mucosal incision was made around the lesion. Submucosal dissection was performed to unroof the overlying mucosa, which was preserved via the remaining one-fifth circumferential mucosal edge (Fig. 1C). Thus a mucosal flap was created and turned aside to expose the mass. *En bloc* resection of the lesion resulted in a 3.5 x 3.0 cm full-thickness defect (Fig. 1D and F). The mucosal flap was flipped back and the defect was almost fully covered. Therefore, closure of the defect was accomplished by simply clipping the two edges of the initially incised mucosa (Fig. 1G and I). The patient was discharged two days later without discomfort. Histopathology confirmed a gastrointestinal stromal tumor (GIST), prognostic group 1 (1).

Discussion

EFR is efficacious and minimally invasive for removal of deep gastrointestinal lesions (2). However, it has technical challenges such as the management of bleeding at the serosal side and closure of a full-thickness defect. Traction was useful to facilitate hemostasis and speed up the procedure (3). Nonetheless, there is a lack of simple methods for prompt closure of a large full-thickness defect. As demonstrated in this case, the preserved overlying mucosa in the form of a flap readily eliminated the active perforation once it was flipped back, tremendously reducing the technical difficulty in the subsequent closure. Moreover, reliability of the closure was enhanced since tension of the wound had been substantially decreased. The water-jet function of the endo-knife should be used to maintain the submucosal space whenever necessary during the mucosa unroofing in order to avoid injury to the lesion's envelope. The added time for unroofing was sufficiently offset by the time saved during closure.

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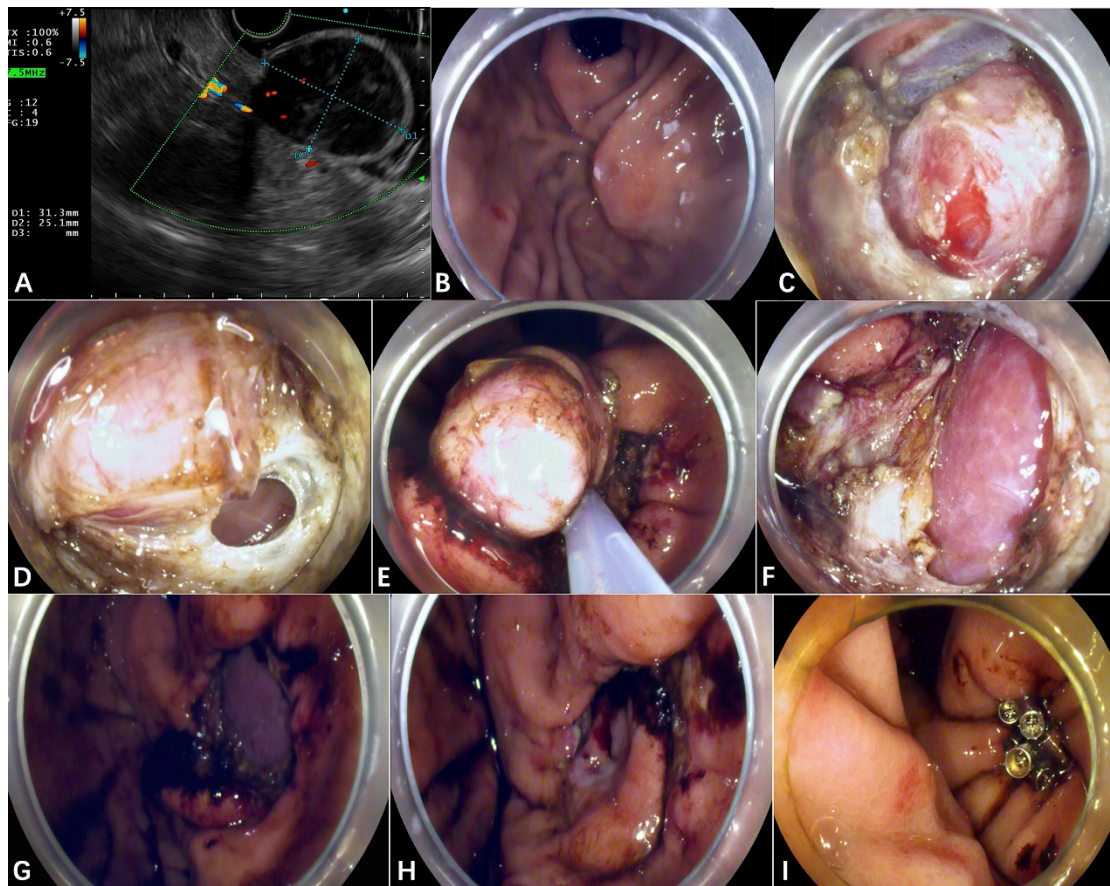


Fig. 1. A. Preprocedural endosonographic view of a hypoechoic mass originating from the muscularis propria. B. Endoscopic view of the lesion with its edge marked for mucosal incision. C. The overlying mucosa was unroofed while preserved with submucosal dissection sparing the mucosal edge that was not incised initially. D and E. *En bloc* full-thickness resection of the lesion. F. A 3.5 x 3.0 cm full-thickness defect through which the liver was visualized. G and H. The preserved mucosal flap that had been turned aside for lesion exposure was flipped back and satisfactorily covered the defect, leaving simply the two edges of the initially incised mucosa to be clipped for closure. I. Closure of the defect was accomplished.