

## Endoscopic closure of a colonic defect using a novel endoloop system via a single-channel endoscope

Successful closure of postoperative defects is essential for endoscopic resection of early neoplasms. The endoscopic purse-string suture (EPSS) using a double-channel colonoscope has been shown to be safe and effective. This method involves the interaction of the endoloop and the metal clips through two separate endoscope channels [1]. However, single-channel colonoscopes are more popular in clinical practice because of their longer length, more flexible operation, and cheaper price, especially when used in the right colon. We report on a novel endoloop system that was innovatively applied via a single-channel endoscope.

A 70-year-old man was referred to our center with a 9-month history of increasing defecation. Endoscopic examination

with biopsy and histopathology revealed a nongranular type of laterally spreading tumor with moderate atypical hyperplasia in the ileocecal junction. Endoscopic submucosal dissection was performed for en bloc resection. The large defect (2.5×2.0 cm) was completely closed by EPSS via a single-channel colonoscope (CF Q260; Olympus, Tokyo, Japan), as follows. As an independent device, the nylon loop (Loop-30; LeCamp, Changzhou, China) was first delivered and positioned around the defect. Multiple clips were then applied to fix the endoloop in place. The loop was tightened by grasping the tail with a hook and pulling backward to close the defect (▶ Fig. 1, ◀ Video 1). The entire procedure was completed via the single channel. The closing process

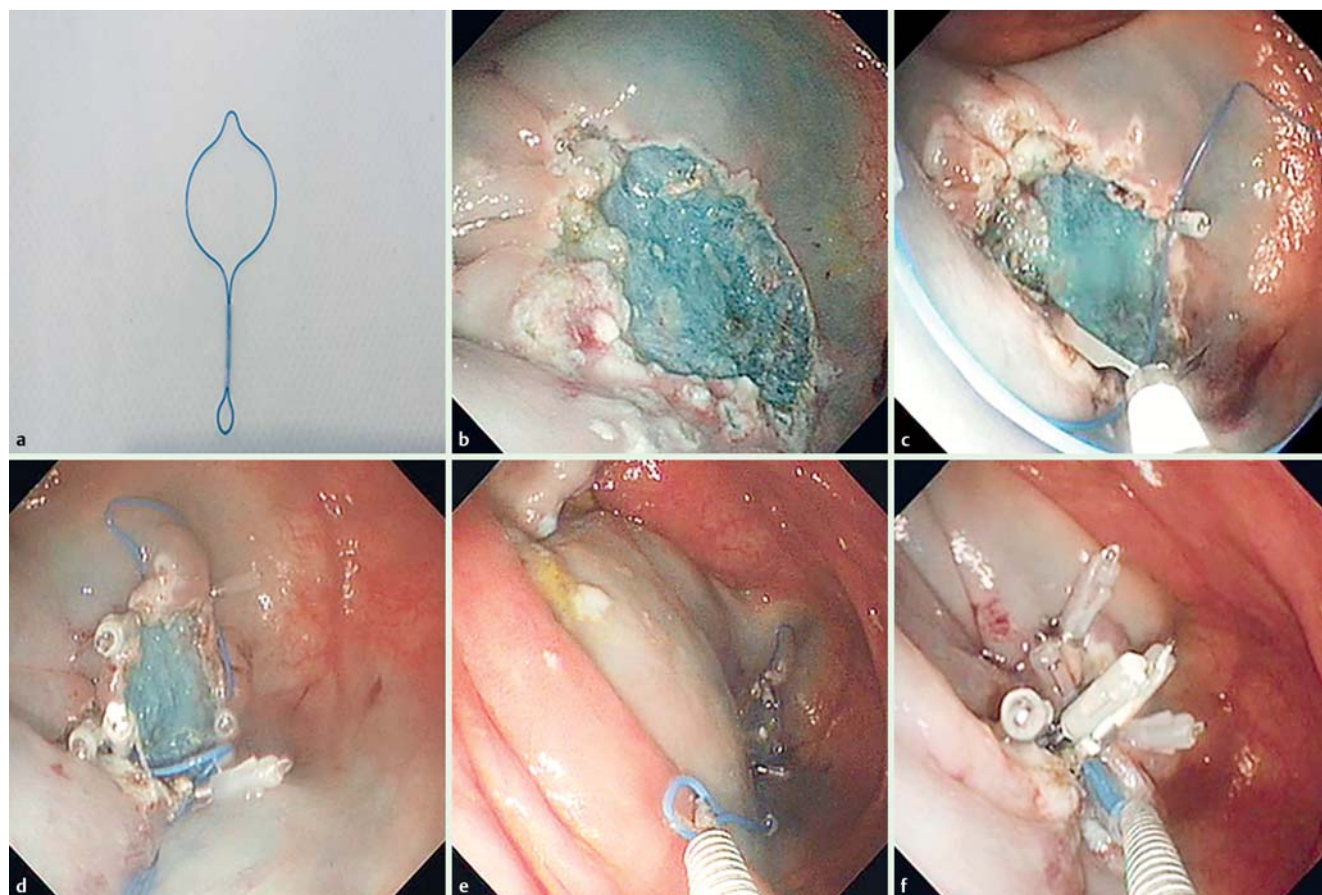
took 8 minutes. The patient was discharged 2 days after the operation without any adverse events.

Lua et al. [2] described their experience of closing a mucosal defect in the stomach using a single-channel gastroscope. To our knowledge, the current case is the

### Video 1



Procedure for closing a colonic mucosal defect using an independent endoloop and clips, via a single-channel colonoscope. The strategy is easy and effective.



**Fig. 1** Closure of a colonic defect using a novel endoloop system via a single-channel colonoscope. **a** The endoloop. **b** Endoscopy showed a large colonic defect at the ileocecal junction following endoscopic submucosal dissection. **c** A separate endoloop was inserted around the mucosal defect and anchored with clips. **d** Several clips were used to anchor the endoloop. **e** The endoloop was tightened by grasping the endoloop tail with a hook and pulling backward. **f** The defect was closed successfully by endoscopic purse-string suture.

first report on closure of a colonic defect via a single-channel colonoscope. With the assistance of an independent endo-loop system, EPSS via a single-channel colonoscope should be feasible, efficient, and safe for endoscopic defect closure.

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