

Colorectal anastomotic dehiscence: an endoscopic modified-stent solution

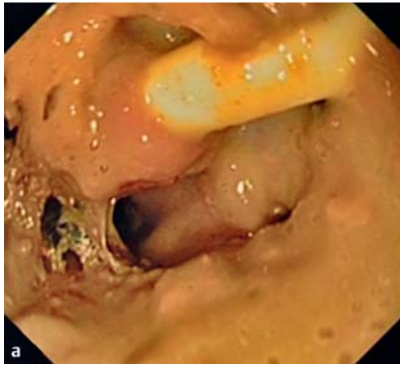


Fig. 1 Post-surgical anastomosis dehiscence in a 64-year-old man after anterior resection for distal rectal cancer. A migrated surgical drain can be seen. **a** Before lavage; **b** after lavage.



Fig. 2 BETA stent (courtesy of Taewoong Medical).

A 64-year-old man with multiple comorbidities (obesity and metabolic syndrome, dilated cardiomyopathy, type 2 diabetes mellitus, chronic renal insufficiency, obstructive sleep apnea syndrome, and colonic diverticula) underwent anterior resection for distal rectal cancer with protective ileostomy. A few days later, enteral juice was flowing from surgical drains; an urgent endoscopy with fluoroscopy showed the presence of a small (8-mm) anastomotic leak, which was managed conservatively. At 1-month follow-up, endoscopy showed a 75% anastomotic dehiscence with intraluminal migration of a drain (Fig. 1). The patient's clinical condition worsened and, after multidisciplinary discussion, an endoscopic trans-anastomotic fully covered metal stent placement was planned.

The ideal stent had to have a large bore, be sufficiently long, and to have an antimigration system. A large-bore over-the-wire stent with a double antimigration system appeared to have these features (head diameter 32 mm, body diameter 24 mm, length 18 cm, BETA stent; Taewoong Medical, Gyeonggi-do, South Korea) (Fig. 2). As the stent was developed for the treatment of postbariatric surgery leak, specific measures were taken to ensure its antimigration activity and to place the larger stent flare proximally in the colon. On the back table, the stent was released inside a 32-Fr tube; the tube and enclosed stent were then turned round, and the stent was reassembled by inserting the original release system but through the opposite end of the stent (Fig. 3).

With the patient under deep sedation, and using endoscopic and radiologic control, the stent was easily released across the anastomotic dehiscence (Fig. 4). Enteric flow through the abdominal drain immediately stopped, allowing removal of the drain 1 week later. The stent was removed 3 months later, and endoscopy showed complete anastomotic resolution (Fig. 5). The patient remained asymptomatic during the 8-month follow-up.

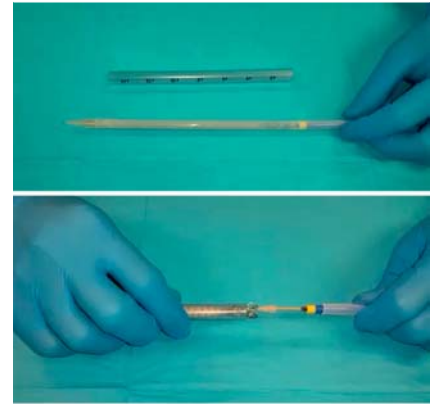


Fig. 3 Reassembling of the stent and delivery system so that the larger stent flare can be positioned proximally in the colon.



Fig. 4 Over-the-wire insertion of the stent through the rectum.

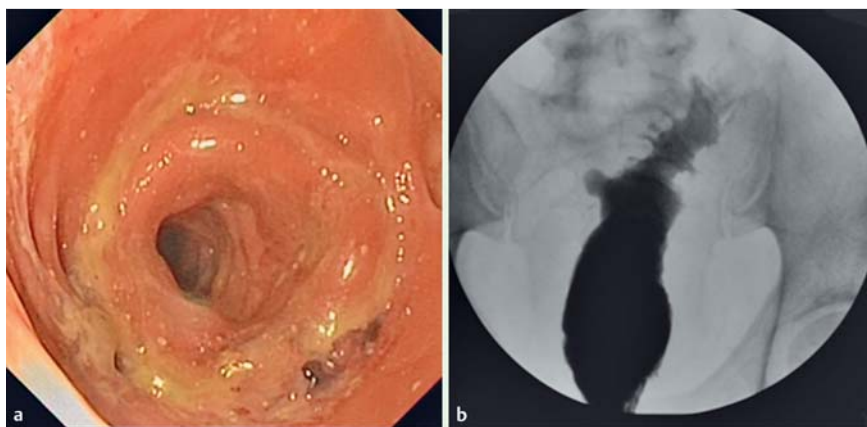


Fig. 5 The sealed anastomosis: **a** endoluminal view; **b** X-ray view.

Video 1



Endoscopic modified-stent solution for the treatment of colorectal anastomotic dehiscence.

Anastomotic dehiscence is the “Achilles’ heel” of resectional colorectal pathology, and is the most common cause of post-operative morbidity and mortality [1–3]. This case report describes a new, alternative nonsurgical method for treating a severe complication, such as colorectal anastomotic dehiscence, using a modified large-bore fully covered stent (▶ **Video 1**).

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Competing interests: None

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