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Novel use of lumen-apposing metal stent for recanalization of complete stenosis of colo-colonic anastomosis

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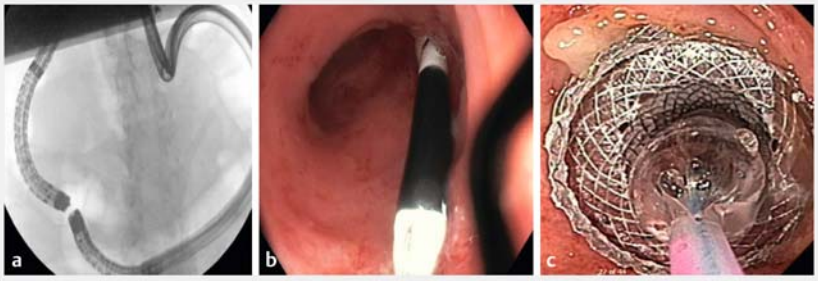
Combined antegrade-retrograde dilation [1] is an established technique that has been adapted for benign colonic obstruction [2, 3] but requires use of accessory devices and predilation followed by deployment of self-expanding metal stents [2, 3]. Rendezvous sigmoidorectal reanastomosis using a lumen-apposing metal stent (LAMS) has also been described with endosonographic (EUS) guidance [4]. We hereby report a recanalization of complete stenosis of a colo-colonic anastomosis without EUS guidance.

An 81-year-old woman with a history of large-bowel obstruction secondary to benign sigmoid diverticular stricture underwent a two-step diverting transverse loop colostomy creation followed by transverse loop colostomy takedown with colo-colonic anastomosis, open sigmoidectomy with colorectal anastomosis, and diverting loop ileostomy creation. Subsequent barium enema and sigmoidoscopy showed a patent colorectal anastomosis but complete stenosis of the colo-colonic anastomosis in the distal transverse colon (▶ **Fig. 1**). Given the distant location of the stenosis from either orifice, we opted for combined antegrade-retrograde forward-viewing colonoscopy for recanalization of the colon lumen.

Using fluoroscopy and transillumination, a 15 × 15 mm LAMS (AXIOS; Boston Scientific, Marlborough, Massachusetts, USA) was safely deployed across the stenosis (▶ **Fig. 2 a, b**). Balloon dilation was performed within the saddle of the stent (▶ **Fig. 2 c**).

The patient was discharged home and a subsequent colonoscopy was performed 2 months later for retrieval of the LAMS and dilation of the remnant anastomosis to 18 mm (▶ **Video 1**). Given patent colo-colonic and colo-rectal anastomosis, the patient underwent loop ileostomy takedown and had complete remission of symptoms with regular bowel movements.

▶ **Fig. 1** Initial findings. **a** Barium enema with contrast filling terminating at the distal transverse colon. **b** Schematic diagram demonstrating anatomy of the patient's colon. Source for ▶ **Fig. 1 b**: Lance Powell.



▶ **Fig. 2** Recanalization procedure. **a** Combined antegrade-retrograde positioning of endoscopes on fluoroscopy. **b** Lumen-apposing metal stent (LAMS) puncture across the anastomosis. **c** Dilation of the LAMS post deployment.

LAMS allows puncture and release in a single-step procedure, thus enabling deployment of the stent into the target lumen without prior guidewire insertion or preliminary dilation, thereby simplifying the procedure with low enteroanastomosis migration risk [5]. Although EUS guidance is typically utilized, this may be technically challenging or unavailable; however, safe LAMS deployment can be performed using only transillumination and fluoroscopy.

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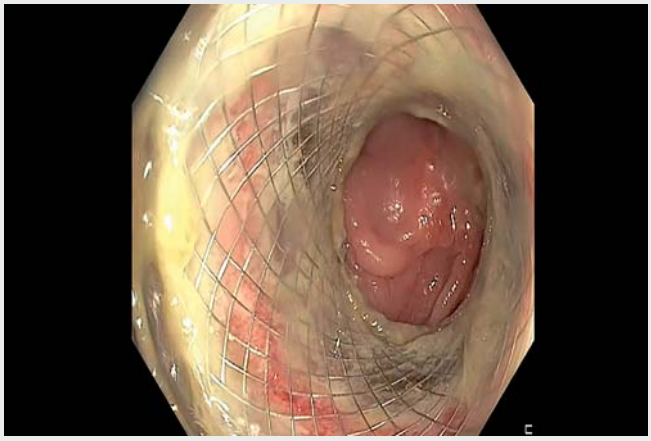

Video 1 Retrieval of the lumen-apposing metal stent and dilation of the colo-colonic anastomosis.

Competing interests

The authors declare that they have no conflict of interest.

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