

Endoscopic recanalization of a completely obstructed colorectal anastomosis using magnets



A male patient who had undergone emergency loop colostomy because of intestinal obstruction secondary to a sigmoid colon tumor subsequently underwent elective rectosigmoidectomy. Endoscopy prior to bowel reconstruction revealed complete stenosis of the colorectal anastomosis (► **Fig. 1**). A previous attempt at recanalization using a needle-knife was aborted due to perforation. Following a multidisciplinary discussion, the decision was made to perform magnetic compression anastomosis.

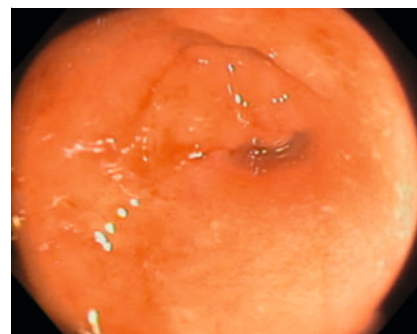
Two 10×5-mm neodymium magnets were inserted endoscopically through the efferent loop and rectum and positioned on the oral and rectal sides of the completely obstructed anastomosis. After 4 days, a follow-up colonoscopy revealed recanalization of the stenosis (► **Fig. 2**, ► **Video 1**). Additionally, balloon dilation using a 15-mm-diameter hydrostatic balloon was performed to achieve an optimal caliber. The patient underwent bowel transit reconstruction after 6 months and remained asymptomatic at the 1-year follow up.

Magnetic compression anastomosis is widely performed in the biliary tract and esophagus but is still in the developmental stage for the gastrointestinal segment. A previous case series indicated its safety and effectiveness [1]. Case reports have described colorectal anastomosis recanalization through techniques such as stricturotomy [2] or in combination with endoscopic ultrasound [3]. Nevertheless, when access to both sides of the obstructed anastomosis is possible, the use of magnets emerges as a technically easier alternative.

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► **Video 1** Endoscopic recanalization using two magnets positioned on the oral and rectal sides of the obstructed anastomosis in a male patient with intestinal obstruction secondary to a sigmoid colon tumor.



► **Fig. 1** Endoscopic view of oral aspect of completely obstructed colorectal anastomosis, following emergency loop colostomy and subsequent rectosigmoidectomy.



► **Fig. 2** Colonoscopic appearance of the colorectal anastomosis recanalized using magnetic compression.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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