

Successful endoscopic treatment of a 12-cm small-bowel Crohn stricture with a custom-made biodegradable stent

A 52-year-old man originally diagnosed with ulcerative colitis presented with an inflamed small-bowel stricture in the ascending limb of an ileoanal J-pouch and was subsequently diagnosed with Crohn disease. The stricture did not respond to medical treatment with either methotrexate or adalimumab, and repeated endoscopic balloon dilation relieved the patient's obstructive symptoms only briefly. As surgical revision was deemed impossible, removal of the J-pouch was advised, but the patient refused an ileostomy. MRI and fluoroscopy during endoscopy revealed a stenosis that was 12 cm in length (▶ **Fig. 1**). A custom-made biodegradable polydioxanone monofilament 15-cm stent was manufactured with a body diameter of 15 mm and a throat diameter of 18 mm (SX-ELLA BD biodegradable stent; ELLACS, Hradec Králové, Czech Republic) (▶ **Fig. 2**). The delivery system was designed as a pull system with distal release. The endoscopic procedure with stent deployment was performed under radiological guidance, and with the patient under general anesthesia. The delivery of the stent was uncomplicated and no adverse events were registered (▶ **Fig. 3a**). The patient described instant relief of his obstructive symptoms. At endoscopic follow-up at 3 weeks the patient felt well and the stent was open (▶ **Fig. 3b**). After 8 weeks the stent was still in situ, but had started to degrade (▶ **Fig. 3c**). Nevertheless, at present (3-month follow-up) the patient remains without obstructive symptoms.



Fig. 1 Axial T₂-weighted MRI scan demonstrating the 12-cm stricture (red arrow) in the ascending limb of the J-pouch in a 52-year-old man with ulcerative colitis.



Fig. 2 The 15-cm custom-made biodegradable stent.

Despite improved medical treatment, Crohn disease can cause strictures throughout the gastrointestinal tract. Effective treatments include bowel resection, stricturoplasty, and endoscopic balloon dilation [1,2]. Partly covered stents have also been used, but have to be removed after 1 week to limit impaction

[3]. In this case we report the successful treatment of a long Crohn stricture using a custom-made biodegradable stent.

Endoscopy_UCTN_Code_TTT_1AR_2AG

Competing interests: None

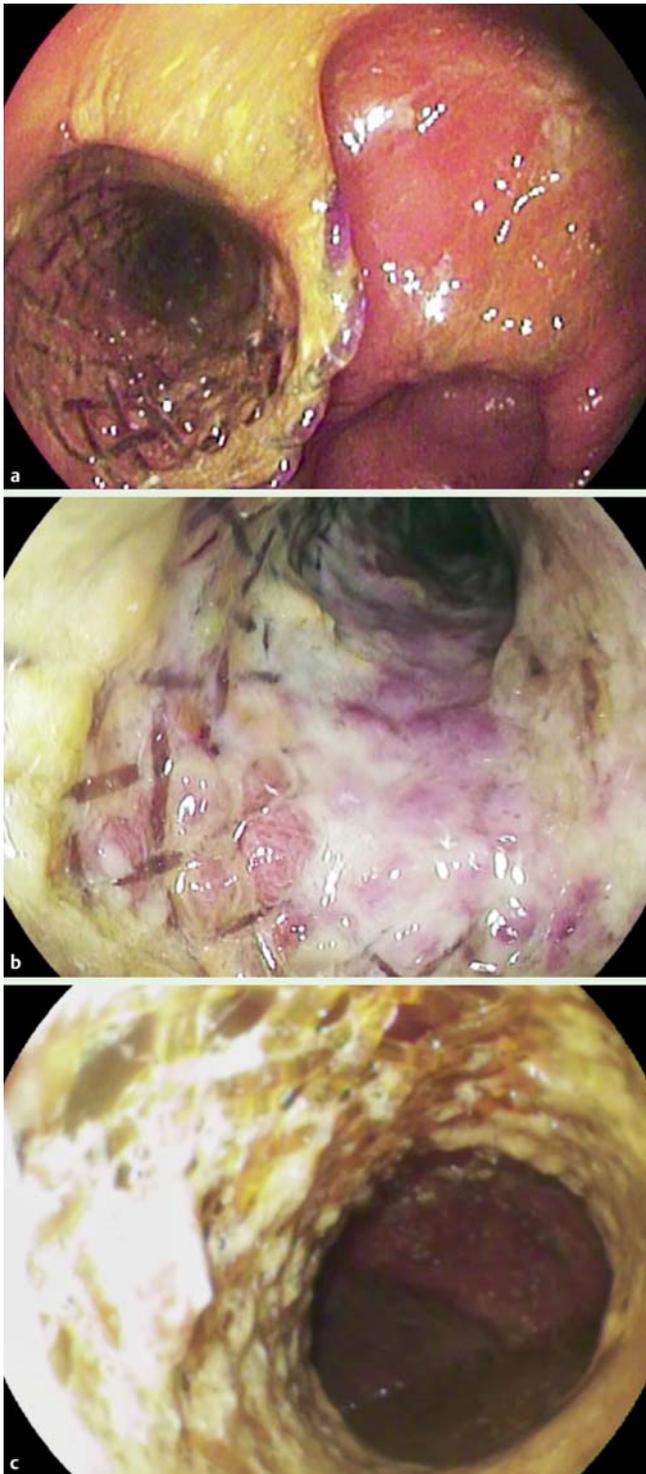


Fig. 3 a Open stent after endoscopic delivery. b Stent at 3-week endoscopic follow-up. c At 8 weeks the stent is partly degraded, but is continuously open.

**John Gásdal Karstensen,
Peter Vilmann, Jacob Hendel**

Endoscopy Unit, Department of Gastroenterology, Copenhagen University Hospital Herlev, Herlev, Denmark

References

- 1 Rieder F, Zimmermann EM, Remzi FH et al. Crohn's disease complicated by strictures: a systematic review. *Gut* 2013; 62: 1072–1084
- 2 Thienpont C, D'Hoore A, Vermeire S et al. Long-term outcome of endoscopic dilatation in patients with Crohn's disease is not affected by disease activity or medical therapy. *Gut* 2010; 59: 320–324
- 3 Loras C, Perez-Roldan F, Gornals JB et al. Endoscopic treatment with self-expanding metal stents for Crohn's disease strictures. *Aliment Pharmacol Ther* 2012; 36: 833–839

Bibliography

DOI <http://dx.doi.org/10.1055/s-0034-1365382>
Endoscopy 2014; 46: E227–E228
 © Georg Thieme Verlag KG
 Stuttgart · New York
 ISSN 0013-726X

Corresponding author

John Gásdal Karstensen, MD
 Endoscopy Unit
 Department of Gastroenterology
 Copenhagen University Hospital Herlev
 Herlev Ringvej 75
 2730 Herlev
 Denmark
john.gasdal.karstensen.01@regionh.dk