

Alternative management of anastomotic colorectal strictures: our experience with fully covered self-expanding metal stents

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We read with great interest the article on endoscopic treatment of postsurgical anastomotic colorectal strictures using biodegradable (BD) stents by Repici et al. [1] published recently in *Surgical Endoscopy*. In this original article, the authors used nondedicated esophageal BD stents with the intent to treat postsurgical anastomotic colorectal strictures refractory to classic mechanical or pneumatic dilation. Their results showed an overall success rate of 45 % (5 of 11 patients) and a 36 % rate (4 of 11 patients) of stent migration.

The unique feature of the BD stent is the gradual expansion process with less traumatic mucosal injury. This should reduce major adverse events (i.e., bleeding and perforations) compared with self-expanding plastic stents (SEPS) or self-expanding metal stents (SEMS), as we already know [2–4]. Another advantage of the BD stent is the possibility of avoiding a second endoscopic procedure to remove the stent, as usually required after SEPS or SEMS placement.

We briefly report our experience with an endoscopic approach to benign colon obstruction at our tertiary referral center of the New Civil Hospital in Modena. Between January 2008 and December 2010, we retrospectively reviewed 17 cases of benign colon obstruction due to an inflammatory or postsurgical stricture, which was treated with fully covered self-expanding metal stents (FCSEMS; Taewoong Medical Co., Seoul, South Korea).

Of the 17 patients, 10 had postsurgical anastomotic colorectal strictures. In this subgroup of patients refractory

to standard endoscopic dilation, FCSEMS was positioned. After a median long-term follow-up period of 30 months (range 2–40 months), stent treatment definitively resolved the stenosis in 8 (80 %) of 10 patients, with two cases of a minor complication. Late stent migration occurred in two cases (patients 1 and 4), as shown in Table 1.

Patient 1 needed early new stent deployment due to subocclusion symptoms. Patient 4 did not request a new stent positioning because a follow-up colonoscopy after 6 months showed an asymptomatic recurrence of the anastomotic stricture, which was treated with a single session of an endoscopic pneumatic balloon (CRE Boston Scientific Corporation, Natick, MA, USA) with a diameter of 18 to 20 mm (4–6 atm).

Patient 10 experienced a postsurgical ischemic colitis with a perianastomotic stricture 8 cm long. In this patient, an asymptomatic recurrence of stenosis was registered after 45 days of follow-up evaluation. Therefore, based on the length of the stricture, surgery was scheduled as definitive treatment.

Perforation reported in other studies [2–4] could have been related to the decubitus of uncovered meshes of partially covered/uncovered stents embedded in the colon wall thickness. In such cases, perforation could be avoided by adopting FCSEMS or BD stents. Nevertheless, the small diameter and the progressive loss in radial force of the BD stent could drastically reduce the overall success rate in this setting. Thus, dedicated BD colon stents are expected to overcome the high migration rate and to improve clinical outcome.

The data from the few series of colonic stenting are conflicting and limited to case series with a limited number of patients or individual case reports. According to our experience and the few published series, we suggest that colon anastomotic strictures shorter than 8 cm should be treated using a FCSEMS with a medium to large diameter

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Table 1 Outcome after placement of a fully covered self-expanding metal stent (FCSEMS)

Patient no.	Age (years)	Etiology of stricture	Site	N° FCSEMS (ϕ /L)	Complications	Clinical success	Duration of stenting (days)	Additional/alternative treatment	Follow-up (month)
1	76	AS	Sigma	2 (24 × 60)	Migration	No	15 + 63	Surgery after 3 months	3
2	67	AS	Rectum	1 (26 × 80)	None	Yes	60		34
3	77	AS	Sigma	1 (26 × 100)	None	Yes	60		30
4	33	AS	Sigma	1 (24 × 80)	Migration	Yes	14	Pneumatic balloon dilation	28
5	83	AS	Rectum	1 (24 × 80)	None	Yes	35	Pneumatic balloon dilation	27
6	67	AS	Rectum	3 (24 × 60)	None	Yes	42 + 48 + 58		14
7	78	AS	Rectum	1 (26 × 100)	None	Yes	45		29
8	84	AS	Sigma	1 (26 × 80)	None	Yes	14		40
9	77	AS	Sigma	1 (26 × 60)	None	Yes	54		38
10	76	AS	Sigma	1 (24 × 120)	None	No	58	Surgery after 2 months	2

FCSEMS fully covered self-expanding metal stent, AS anastomotic stricture, N° number of stent inserted, L length of stent in mm, ϕ diameter of stent in mm

(>24/26 mm). Reports of this treatment show a high long-term clinical success rate and limited complications.

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