

Interposition of small bowel as replacement for the descending colon

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We report an unusual case of reconstruction of the food passage with the interposition of small bowel after iatrogenic loss of the descending colon. After interposition with the use of 2 small-bowel segments — proximal jejunum and terminal ileum — the patient reported a good quality of life and required no medication to thicken the stool.

Case report

A 52-year-old man underwent laparoscopic resection of the sigmoid colon for recurrent sigmoid diverticulitis in another hospital. Owing to anastomotic leakage and anastomotic stenosis, several dilations were carried out. Two months later open resection of the anastomotic stenosis was done. Three months after that, he presented to our hospital because of symptoms of subileus due to a recurrent high-grade anastomotic stenosis. A computed tomography (CT) scan revealed an inflammatory conglomerate tumour with a paracolic abscess in the lower abdomen; the loss of haustration had caused a high-grade narrowing of the descending colon. The laparotomy performed in our hospital showed a fibrotic, marginally compensated ischemia of the entire descending colon in addition to an abscess-forming covered anastomotic leak. This was caused by a proximal transection of the marginal artery of the colon and a centrally ligated inferior mesenteric artery. The left transverse colon showed normal perfusion. In spite of maximum mobilization of the right colon and the right colic artery, a transversorectostomy

was technically not possible. As an alternative to a permanent colostomy or an ascendo- or ileorectostomy with resection of the transverse colon, a small-bowel interposition between the left transverse colon and the rectum was performed. To keep the interposition as short as possible, 2 segments of small

bowel were used: a proximal jejunal segment and a terminal ileal segment. The reconstruction was protected by a temporary ileostomy, which was reversed 14 days later after an uncomplicated postoperative course with a normal radiographic appearance (Fig. 1).

Thirty-six months later, enteroscopy



FIG. 1. Situation after small-bowel interposition.

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Accepted for publication Feb. 22, 2008

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Note de cas

revealed that all anastomoses were non-irritated; macroscopically, there was discrete inflammation of the mucosa of the interposed small-bowel section. Histologic examination showed a normal intestinal mucosa with the exception of 1 focal capillary ectasia.

Without medication to thicken stool, the patient passes 2–3 soft stools daily. He reports having a good quality of life.

Discussion

Reconstruction of the food passage after the iatrogenic loss of the descending colon represents a special challenge for the surgeon, particularly if the patient originally suffered from a benign disease. If, even after maximum mobilization of the colon, a tension-free anastomosis of transverse colon and rectum is not possible owing to local vascular conditions, 2 standard procedures are usually done: the construction of either a permanent colostomy, or an ascendo- or ileorectostomy. For the 2 latter procedures, resection of the stool-thickening transverse colon is necessary and decreases the patient's quality of life. As an alternative to these procedures, an ileocecal interpositional bridging graft is possible.¹ Because of the reservoir function of the cecum, this procedure offers advantages after re-

section of the rectal ampulla, for example in rectal cancer. In our opinion, when a functioning rectal ampulla remains — as in our patient's case — interposition of small bowel as a replacement for the descending colon without an additional stool reservoir (i.e., cecum) imitates the best physiologic passage of stool, because a stool reservoir above a functioning rectal ampulla does not yield a satisfactory result.² That was also the reason for not constructing a pouch with the interpositioned small-bowel segments, as is common for colectomy patients.

The use of the ileum as a rectal replacement with the ileoanal pouch procedure is the standard for surgical therapy in ulcerative colitis and familial adenomatous polyposis and is carried out preferably as a J pouch.³ Although it could be proven that the jejunum offers physiologic advantages when used as a rectal replacement,⁴ it has not become established as a standard therapy with the anal pouch procedure.⁵ In principle, the pouch procedure could prove that the use of the small bowel — terminal ileum and jejunum — as a colorectal replacement is possible.

As far as we know, the use of 2 small-bowel segments as a replacement for the descending colon has not been described in the medical literature. Of course, our

single experience does not allow general conclusions about the physiologic function of the described procedure. In the rare situation of a nonreconstructable colon because of an ischemic descending colon, the interposition described here constitutes an alternative to the terminal stoma or the ileo- or ascendorectostomy and offers a satisfactory quality of life for the patient.

Competing interests: None declared.

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