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LETTER TO THE EDITOR

Pull-through procedure as treatment for coloanal anastomotic dehiscence following laparoscopic total mesorectal excision

A. A. F. A. Veenhof · D. L. van der Peet · C. Sietses · M. A. Cuesta

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Dear Editor:

Anastomotic leakage following laparoscopic rectal surgery remains a frequent and serious complication. Overall leak rates for laparoscopic anterior resections and coloanal anastomosis are reported to range from 7.3% to 17%. Several studies describing risk factors for anastomotic dehiscence have been published. Neoadjuvant chemoradiotherapy, old age, male gender and distal anastomosis are different reported factors. Anastomotic dehiscence, with or without protective loop ileostomy, can be limited to the pelvis as a local abscess that has to be drained or followed by general peritonitis, in which standard intervention is taking down the anastomosis with creation of a left colostomy. In the last case, restorative procedures are often very difficult to perform due to the short remaining rectal stump, making dissection very hazardous. The authors present a pull-through procedure in a male patient as treatment of coloanal anastomotic dehiscence, consequently preventing a definitive colostomy.

A 60-year-old man with a proven rectal adenocarcinoma located 8 cm from the anal verge had a laparoscopic total mesorectal excision (TME) following radiation therapy (five doses of 5 Gy) 6 weeks earlier. No perioperative complications occurred, and a stapled anastomosis was made approximately 3–4 cm from the anal verge at the level of the pelvic floor. The donuts were intact and the anastomosis was checked with methylene blue, after which a protective loop ileostomy was created. On day 6 after surgery, the patient developed signs of general peritonitis, most likely based on an anastomotic dehiscence. At laparotomy, a small posterior leak in the anastomosis was observed with general purulent peritonitis. Due to the low anastomosis in this patient and therefore the difficulty of creating a new anastomosis in the future, a pull-through procedure was performed in order to prevent a definitive colostomy, according to the wishes of the patient. The splenic flexure was mobilized, and the descending colon was pulled through the anus and fixated with two sutures. The protective loop ileostomy was preserved. After the pull-through procedure, no complications occurred and the patient was discharged from hospital after 10 days. Two weeks later, the pull-through colon was inspected under anesthesia. At this time, the entire circumference of the descending colon had already grafted onto the remaining rectum and the excess material of the pull-through graft was removed. Four weeks after the pull-through procedure, the loop ileostomy was closed under general anesthesia. After 4 months of follow-up, the patient is doing well with good continence and two to six defecations per day.

Following laparoscopic TME with a low or coloanal anastomosis, leak rates of up to 17% have been reported. In the case of local pelvic abscess formation, the treatment includes an adequate drainage of the abscess, mostly through the anastomosis. In the case of a general peritonitis, it is often necessary to take down the anastomosis and create a colostomy. Frequently, this colostomy will be permanent due to the difficulty in restorative procedures. The very short remaining rectal stump, covered with scar tissue at the pelvic floor, makes re-anastomotic procedures

A. A. F. A. Veenhof · D. L. van der Peet · C. Sietses · M. A. Cuesta
Department of Surgery, VU Medical Center,
de Boelelaan 1117,
1081 HV Amsterdam, The Netherlands

M. A. Cuesta (✉)
Department of Surgery, Vrije Universiteit Medical Center,
Post bus 7057, 1007 MB Amsterdam, The Netherlands
e-mail: ma.cuesta@vumc.nl

very difficult. A historical surgical procedure, the pull-through coloanal operation can help solve this problem during re-intervention. If the patient is hemodynamically stable and the peritonitis only purulent, the pull-through procedure may be considered, subsequently avoiding a definitive colostomy. A temporary loop ileostomy may be necessary for protection of the pull-through graft and prevention of complications. In this case, the pull-through procedure avoided a permanent colostomy. In our opinion, a pull-through procedure can be considered in the case of a low or coloanal anastomotic leak following TME in order to prevent a definitive colostomy on patient demand.