

Original Article

Abdominosacral repair for a rectovaginal fistula with anastomotic stenosis after low anterior resection
Report of a case

Satoshi Okabe, Toshiaki Ishikawa, Shuuro Tanami, Hiroshi Kuwabara, Toshiaki Hukahara, Masaru Udagawa, Shunrou Ootsukasa, Takehiro Arai, Shouji Maruyama, Naoya Murase, Hironori Yamashita and Takehisa Iwai

First Department of Surgery, Faculty of Medicine, Tokyo Medical and Dental University

The management of a postoperative rectovaginal fistula after low anterior resection for rectal cancer is difficult and requires reconstruction of the anastomotic site and fistula. The results of reconstructive operation are often unsatisfactory.

Herein, we describe our reconstruction technique using the posterior approach through the vaginal lumen for a high rectovaginal fistula repair.

This reconstructive operation is useful for postoperative rectovaginal fistulas accompanied by severe stenosis of the anastomotic site following low anterior resection for rectal cancer.

Key words: rectovaginal fistula, rectal cancer, low anterior resection, circular stapling technique

Introduction

Sphincter sparing resection of rectal carcinomas may accompany significant anastomotic leaks. The rectovaginal fistula following dehiscence of a low anterior colorectal anastomosis is relatively rare complication, and little is known about optimal surgical management

of patients with such a complication¹. A new technique that repairs rectovaginal fistula with severe stenosis of colorectal anastomosis is described.

Case Report

A 62-year-old woman underwent a low anterior resection (LAR) for rectal carcinoma on April 27, 1995. Starting on the 7th postoperative day, fecal discharge appeared from the vagina, while the patient also had fever and lumbago. An emergency operation was performed on May 23, 1995. We suspected of rectovaginal fistulas and a transverse colostomy was performed to divert the feces. Her signs and symptoms rapidly disappeared after the diverting colostomy was made, but barium enema examination confirmed our suspicion of the rectovaginal fistula and also demonstrated complete obstruction of the colorectal anastomosis (Figure 1). Endoscopic examination revealed that the rectovaginal fistula was located beneath the vaginal fornix surrounded by staples used for colorectal anastomosis. We performed follow-up care in the outpatient setting for 15 months. As a result of medical checkup, we diagnosed no recurrence of rectal carcinoma.

Technique

An abdominosacral repair was performed for the rectovaginal fistula with anastomotic stricture on August 6, 1996. At the outset of the procedure, the patient was

Correspondence: Satoshi Okabe
First Department of Surgery, Faculty of Medicine, Tokyo Medical and Dental University, 1–5–45 Yushima, Bunkyo-ku, Tokyo 113, Japan.
Tel. 03–5803–5255
FAX: 03–3817–4126
Received September 20, 1999; Accepted September 18, 2000

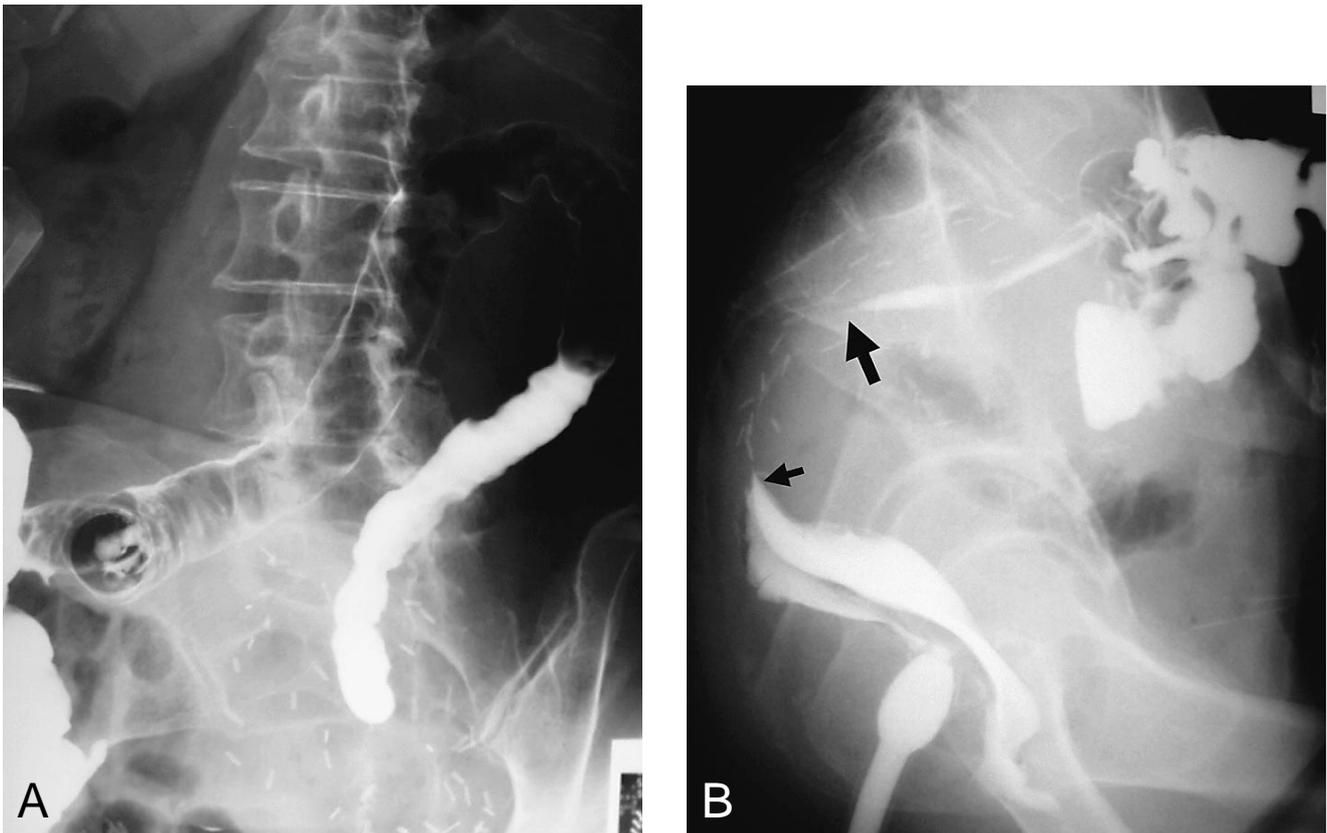


Fig 1. X-ray examination after low anterior resection for rectal cancer revealed formation of the rectovaginal fistula and obstruction at the colorectal anastomotic site.

A: Roentgenographic examination using Gastrografin from the stoma showed severe stenosis of the colon in the pelvis.

B: Gastrografin enema examination demonstrated a high rectovaginal fistula (small arrow) and obstruction of the colorectal anastomotic site (large arrow).

placed in the lithotomy position, and an incision was made in the median section along the previous skin incision line. We proceeded to resect the sigmoid colon, and removed the adhesions between the intrapelvic colon and the retroperitoneum. After hysterectomy, the vaginal lumen was exposed and the site of the rectovaginal fistula was ascertained. Since there was a significant dislocation of both the posterior vaginal wall and rectum toward the sacrum, we separated the colon below the vaginal fornix. We closed the transverse colostomy because we intended to pass the remnant colon through the extended vaginal lumen. The colon was freed, while sparing the middle colic vessels, and lead into the pelvic cavity through the window of the intestinal mesentery above the ileocecal recessus. Moreover, the colon was brought into the vaginal lumen.

With the patient in the prone jack-knife position, the traction bandage pulled the buttocks laterally. The skin incision began about 1cm lateral to the left margin

of the sacrum and ended 2 cm above the anus. The gluteus maximus muscle was exposed and incised by an electronic scalpel in order to obtain a good view of an operative field. The coccyx was removed by using a Luer instrument. Moreover, the levator ani muscle was incised in the median section followed by ligating thread for landmark. Next, we dissected the endopelvic fascia, exposing the lumen of the rectum below the rectovaginal fistula. We incised the posterior wall of the vagina, leading the anal margin of the proximal colon through the vaginal lumen into the lower rectum. We performed colorectal anastomosis by Gambee's suture (Figure 2). The continuous suction drain was placed in the cavity from which the coccyx was removed. Diverting ileostomy was made at the right lower abdomen.

The patient's postoperative course was complicated by intrapelvic abscess, but recovery from perianastomotic trouble two years after the posterior approach reconstruction. Radiological examination using

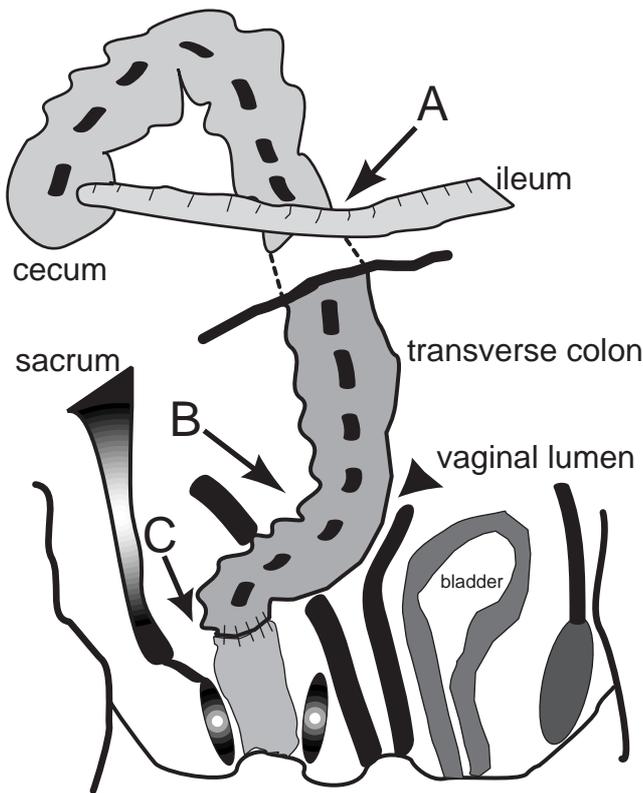


Fig 2. Abdominosacral repair technique for rectovaginal fistula with severe stenosis of the anastomotic site after low anterior resection for rectal cancer.

A: The remnant colon was lead into the pelvic cavity through an avascular window of the intestinal mesentery.

B: The anal margin of the proximal colon was lead through the vaginal lumen into the lower rectum.

C: Colorectal anastomosis using Gambee's suture was performed.

Gastrograffin from the terminal ileum ensured the absence of a leak at the anastomotic site (Figure 3).

Discussion

Since the introduction of stapling instruments for the anastomosis of LAR, the incidence of anastomotic leaks has decreased by approximately 8%. Little is known about the uncommon complications of an early postoperative rectovaginal fistula directly related to the circular and double stapling technique.^{2,3} Traumatic desquamation between the rectal and vaginal wall or trauma to the vaginal wall by the anastomotic device is suggested as a cause³.

In order to treat rectovaginal fistulas, including the repair of rectovaginal post-irradiation fistulas^{4,5,6,7,8, 9,10}, some clinicians have tried vaginal, transanal, and trans-sphincter repairs as well as coloanal reconstruc-



Fig 3. X-ray examination three years after the posterior approach reconstruction for the rectovaginal fistula. Photofluorographic examination using Gastrographin from the ileostomy demonstrated the colon in the vaginal lumen without a passage disturbance and with complete continuity of the colorectal re-anastomotic site.

tions.^{11,12} Recently, several cases treated by placing a self-expanding metal stent in the rectum have been reported.^{13,14} Moreover, Schwenk¹⁵ stresses that laparoscopic resection of high rectovaginal fistulas with primary intracorporeal anastomosis is feasible and should be considered in selected cases as an alternative "minimally-invasive" approach to this disease.

But if the patient's postoperative course was complicated by pelvic abscess and severe stenosis of the rectum, we can hardly reconstruct the anastomotic site. The abdominosacral repair is effective when the rectum lumen is blocked and when there are severe adhesions between the rectum and the sacral vertebra following total mesorectal excision.

We believe that the posterior approach through the vaginal lumen is reliable and effective in repairing rectovaginal fistulas with severe stenoses of the anastomotic sites secondary to stapled anastomoses from low anterior resections for rectal cancer.

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