## **Case Report**

# A Rectal Cancer Prolapsed through the Anus Immediately before Surgery Performed with the Laparoscopic Hartmann Procedure

Yayoi Kawahara<sup>1</sup>, Hidejiro Kawahara<sup>1,2</sup>, and Katsuhiko Yanaga<sup>2</sup>

<sup>1</sup>Department of Surgery, Kameari Hospital <sup>2</sup>Department of Surgery, The Jikei University School of Medicine

#### ABSTRACT

A 73-year-old woman had noticed bloody stools since April 2014, and a colonoscopic examination performed at a neighborhood clinic detected a 5-cm-diameter type I tumor in the rectum 10 cm from the anal verge. She was referred to Kameari Hospital for surgical therapy in May 2014. Because she had long been receiving a corticosteroid and was unable to walk because of arthrogryposis, she was scheduled to undergo an elective laparoscopic Hartmann procedure. She received an oral laxative on the day before surgery and had severe lower abdominal pain during the night. Emergency computed tomography revealed an intussusception-like lesion without peritonitis in the lower rectum. The patient decided to undergo the planned elective operation. However, immediately before surgery, the tumor was found in a part of the rectum which had prolapsed through the anus. She underwent the laparoscopic Hartmann procedure as scheduled.

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Key words: rectal cancer, prolapse recti, laparoscopic surgery

## Introduction

Rectal prolapse occurs most often in elderly women and is characterized by protrusion of all layers of the rectum through the anus. The estimated prevalence of rectal prolapse is 1% in adults older than 65 years. The many factors contributing to rectal prolapse include constipation, pregnancy, levator diastasis, redundant sigmoid colon, deep culde-sac, abnormal rectal angle, and a lack of rectal retroperitonealization<sup>1</sup>. We treated a patient in whom a rectal cancer had prolapsed through the anus just before a planned laparoscopic Hartmann procedure, which she did undergo. It is uncommon that a tumor is found in the prolapsed rectum through the anus immediately before an elective operation.

## CASE PRESENTATION

A 73-year-old woman had been treated with a corticosteroid for more than 10 years because of rheumatoid arthritis. She had noticed bloody stools since April 2014, and a colonoscopic examination performed at a local clinic had detected a 5-cm-diameter type I tumor in the rectum 10 cm from the anal verge. She was referred to Kameari Hospital for surgical therapy in May 2014. She was scheduled to undergo a laparoscopic Hartmann procedure because of the long-term corticosteroid use and could not walk because of arthrogryposis. She had received an oral laxative on the day before the planned surgery at Kameari Hospital and had severe lower abdominal pain during the night. Emergency computed tomography revealed an intussusception-like le-

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Mailing address: Hidejiro Kawahara, Department of Surgery, Kameari Hospital, 3-36-3 Kameari, Katsushika-ku, Tokyo 125-0061, Japan.

E-mail: kawahide@jikei.ac.jp

sion without peritonitis in the lower rectum (Fig. 1). She decided to undergo the elective operation according to the planned schedule. However, immediately before surgery, the rectal tumor was found to have prolapsed through the anus (Fig. 2).

The patient underwent a laparoscopic Hartmann procedure as planned. A 12-mm port used as the camera port

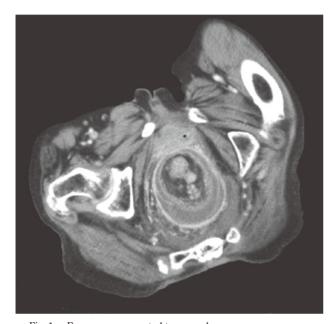


Fig. 1. Emergency computed tomography. Emergency computed tomography revealed an intussusception-like lesion without peritonitis in the lower rectum.

was inserted at the umbilicus. Two 5-mm ports were inserted into the right upper and lower quadrants, and another 5-mm port was inserted into the left lower quadrant and made into a colostomy. After the prolapsed rectum was resected under direct visual guidance, a stump of the oral side of the colon was closed with a 60-mm-long liner stapler and pushed through the anus into the pelvis. A stump of the anal side of the intestine was closed manually through the anus under direct visual guidance. After pneumoperitoneum was established, a total mesorectal excision was performed laparoscopically, and a colostomy was created at the left lower quadrant to replace the inserted port position (Fig. 3). The operation lasted 190 minutes, and perioperative bleeding was slight.

After surgery, the patient gradually recovered, and the colostomy was functioning well. She was transferred without complications to a rehabilitation hospital on the 10th postoperative day. The postoperative pathological diagnosis was T3 N2 M0 stage IIIc (Fig. 4).

## DISCUSSION

The present patient had typical risk factors for postoperative intestinal anastomotic leakage. We had planned to perform a laparoscopic Hartmann procedure, to transect the rectum with a stapler intracorporeally and create a colostomy in the left lower quadrant which would replace the in-



Fig. 2. Perineal finding in an open room.

The tumor was found just before surgery in the rectum prolapsed through the anus.



Fig. 3. Postoperative abdominal finding.

A colostomy was made in the left lower quadrant to replace the inserted port position.



Fig. 4. Surgical specimen.

A type I tumor 5 cm in diameter was in the resected specimen.

serted port position. However, the cancer had prolapsed through the anus just before the planned surgery and was found in the rectum. The rectal prolapse through the anus was resected under direct visual guidance, and the cancer in the prolapsus recti was resected simultaneously. This surgical procedure is similar to a prolapsing technique for low rectal cancer<sup>2</sup>. In the prolapsing technique, the most

difficult procedure is eversion of the distal rectum to pull it outside the body through the anus. However, because this patient had prolapsus recti, she did not require eversion of the distal rectum. If this patient had undergone a laparoscopic Hartmann procedure in the absence of prolapsus recti, an approximately 4-cm-diameter abdominal wound would have been required to remove the surgical specimen. After

this procedure the abdomen had 3 port incisions and a stoma

Rectal prolapse involves intussusception of the bowel. Patients with sigmoidorectal intussusception are reported to have been treated with laparoscopic surgery<sup>3-5</sup>. A tumor is rarely found in a rectum that has prolapsed through the anus immediately before an elective operation.

Acknowledgement: There are no conflicts of interest to declare.

## ETHICAL STATEMENT

Written informed consent was obtained from the patient for publication of the case report and any accompanying images. The patient's anonymity has been preserved.

## REFERENCES

- Gordon PH, Nivatvongs S. Colorectal disorders. In: principles and practice of surgery for the colon, rectum and anus. 3<sup>rd</sup> ed. New York: Informa Healthcare; 2007. p. 415–43.
- Fukunaga M, Kidokoro A, Iba T, Sugiyama K, Fukunaga T, Nagakari K, et al. Laparoscopy-assisted low anterior resection with a prolapsing technique for low rectal cancer. Surg Today. 2005; 35: 598-602.
- Park KJ, Choi HJ, Kim SH, Han SY, Hong SH, Cho JH, et al. Sigmoidrectal intussusception of adenoma of sigmoid colon treated by laparoscopic anterior resection after sponge-onthe-stick-assisted manual reduction. World J Gastroenterol. 2006; 12(1): 146-9.
- 4. Chuang CH, Hsieh CB, Lin CH, Yu JC. Laparoscopic management of sigmoid colon intussusception caused by a malignant tumor: case report. Rev Esp Enferm Dig. 2007; 99(10): 615-6.
- Greenley CT, Ahmed B, Friedman L, Deitte L, Awad ZT. Laparoscopic management of sigmoidorectal intussusception. JSLS. 2010; 14: 137-9.