Case Report

Stercoral Perforation of the Rectum Forming Recto-vaginal and Recto-cutaneous Fistulae: A Case Report

Tsunehiko MARUYAMA, Fumito IMAMURA*, Masataka FUKUE*, Hiroyuki AOYAGI* and Mutsumi NOZUE**
Department of Surgery, Moriya Daiichi General Hospital
*Department of Surgery, Tsukuba Memorial Hospital
**Department of Surgery, Shonai Amarume Hospital

Stercoral perforation of the colon is a direct result of ischemic pressure necrosis by a stercoraceous mass. We present a case of the stercoral perforation of the rectum combining recto-vaginal and recto-cutaneous fistulae. A 79-year-old woman was admitted to hospital for pain and swelling of the perineal region. The patient was diagnosed as having a rectal perforation forming a recto-vaginal fistula and a recto-cutaneous fistula. In the primary procedure, sigmoid colon impacted with feces was transected and a colostomy was formed. After closing the abdominal wall, the necrotic perineal region was debrided. The second operation was carried out 1 month after the first one. The remnants of the rectum and anus were excised, and the perforated portion of the vaginal posterior wall was sewed up from the outside. It appeared effective to divide the operation into two distant phases.

Key Words: stercoral perforation, recto-vaginal fistula, recto-cutaneous fistula

Introduction

Perforation of the rectum usually occurs as complication of disease such as carcinoma, colitis, diverticular disease or penetrating abdominal trauma. One type of perforation is a stercoral perforation of the rectum, which is defined as a perforation of the bowel due to pressure necrosis from a fecal mass [1], is infrequently reported in the surgical literatures. Patients on antacids [2], codeine containing drugs [3], narcotics [4], nonsteroidal anti-inflammatory drugs (NSAIDs) [5], and tricyclic anti-depressants [2] have been reported as being at higher risk for this disease. Herein, we report a case of the stercoral perforation of the rectum combining a recto-vaginal fistula and a recto-cutaneous fistula in a patient who had been taking anti-depressants for a long time.

Case Report

A 79-year-old woman was admitted to our hospital for pain and swelling of the perineal region on March 13, 1999. She had had a hysterectomy at the age of 41 for a hysteromyoma, and she had been taking antidepressant for senile depression over the last several years previously. She had suffered from constipation for 60 years and had been using enemas in order to defecate. She was hospitalized in our hospital with intractable constipation and abdominal distension in November 1998. A barium enema at that time revealed dilation and the anterior protrusion of the rectum towards the posterior vaginal wall. There were no stenotic findings. The stercoraceous mass was recognized inside the intestinal tract despite performing preparation for an examina-
tion (Fig. 1). The patient managed to control her bowel movements with a catharticum, and was discharged from hospital. Three months post-discharge, however, she noticed the release of air from her vagina (March 13, 1999), and visited our hospital on March 16 because of pain and enlargement of the left perineal region. Physical examination revealed normal vital signs, with a temperature of 36.0°C, a blood pressure of 122/64mmHg, and regular pulse rate of 66/min. A large area of the left perineal region was necrotic, and a recto-cutaneous fistula was recognized. Feces were evacuated from the fistula. A recto-vaginal fistula was also recognized (Fig. 2a, b, c). No abnormalities of the abdomen were noted. The white blood cell count was 15,700/µl and the hematocrit was 30.6 per cent. A computed tomography scan revealed intra-vaginal and subcutaneous air around the left perineal region. Neither ascites nor free air were recognized in the abdominal cavity (Fig. 3). The patient was diagnosed as having a rectal perforation forming a recto-vaginal fistula and a recto-cutaneous fistula. An emergency operation was performed on the same day. At first, a laparotomy was performed. The sigmoid...
colon was impacted with feces: this segment of colon was transected and a colostomy was formed. After closing the abdominal wall, the necrotic perineal region was debrided. After the operation, a dressing change with the irrigation was performed twice a day. Eating habits and bowel movements normalized post-operatively, and granulation tissue formed in the debrided region. The second operation was carried out 1 month after the first one. At that time, the granulation tissue (without signs of infection) had begun in the perineal region, but the recto-vaginal and recto-cutaneous fistulae still remained (Fig. 4a, b). The remnants of the rectum and anus were excised, and the perforated portion of the vaginal posterior wall was sewed up from the outside. The perineal region was sutured in a tri-laminar manner, and the defect was completely covered with skin. The resected sections of the anus and rectum completely tore. The microscopic examination of these tissues only showed a fibrous change of the wall and slight cell infiltration. She was discharged uneventfully from our hospital on the 71st day after the first operation.

**Discussion**

The most common site for stercoral perforation of the colon is the sigmoid colon (41%), while the second most common is the rectosigmoid (24%) [6]. To our knowledge, this is the first report of stercoral perforation of the rectum into the retroperitoneal space, with subsequent formation of a recto-vaginal fistula and a recto-cutaneous fistula.

The cause of the perforation could have been pressure necrosis from the hard fecal mass as reported cases before. In this case, however, another possibility should be considered. The dilatation and the anterior protrusion of the wall of the rectum, the so-called rectocele, which was demonstrated by the barium enema at the first administration, may have caused the perforation. Although no cases have been reported with rectocele perforation, the specific characteristics in such cases seem to coincide with the particular route of perforation and fistulae in this case. In the future, we will
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Consider a prophylactic operation for cases with a rectocele that are associated with high risks of perforation.

After re-evaluating our treatment strategy, it appears effective to divide the operation into two distant phases. The first operation was aimed at debriding the large infected perineal area, preventing further infection by making a colostomy and providing effective drainage. Once the wound became clear and the granulation tissue appeared, the reconstruction was carried out in the second phase. This strategy seemed to be effective this rare case, and could be used by other clinicians in similar circumstances.

References