Case Report

Ileorectal fistula due to a rectal cancer—A case report

Minoru Takahashi a, *, Takahiro Fukuda b

a Chiyoda Clinic, 1773-1, Akaawa, Chiyoda, Ohra, Gunma 370-0503, Japan
b Department of Surgery, Gunma Cancer Center Hospital, 617-1, Takabayashi-nishi, Ohta, Gunma 373-8550, Japan

1. Introduction

While obstruction, perforation and penetration into adjacent structures are well-known complications of cancer of the colon and rectum, fistula formation to other parts of the gastrointestinal tract is considered very rare. Although this complication can be diagnosed readily by radiographic imaging, colonoscopy has also been useful. We present a case of ileorectal fistula due to rectal cancer and review its clinical aspects.

2. Case report

A 51-year-old man was admitted to our hospital because of diarrhea. Barium enema and colonoscopy revealed a cancer in the lower rectum and fistula formation from the site to ileum. Resection of the rectal cancer and ileorectal fistula was performed. Histologically, the resected lesion was mucinous adenocarcinoma with contiguous invasion from the rectum to the ileum. The patient is alive with no sign of recurrence 120 months after operation. Fistula formation between the colon and other gastrointestinal tract organs is very rare, especially for rectal cancer. Fistula-forming colorectal cancers are rarely found to have metastatic lesions in the liver, peritoneum and lymph nodes despite their invasive behavior; accordingly, curative resection involving partial resection of the intestine with fistula is expected.

Histological examination of biopsy specimens revealed adenocarcinoma. Resection of the rectal cancer and ileorectal fistula were performed under a preoperative diagnosis of rectal cancer with an ileorectal fistula. A cross section of the fistulous tract and the rectum showed contiguous carcinomatous invasion from the rectum to the wall of the ileum (Fig. 3). Histologically, the resected lesion was mucinous adenocarcinoma and pathological staging was Dukes B, such as pT4, pN1, pM0. The patient is alive with no sign of recurrence 10 years after surgery.

3. Discussion

Malignant fistula of the gastrointestinal tract was first described by Haldane in 1862. Fistula formation between the colon and other gastrointestinal tract organs is rare. Diverticular disease has been the major cause in western countries. Other disorders reported to cause fistula include Crohn’s disease, gastric ulcer, lymphoma and carcinoid tumor. Carcinoma is the minor cause of gastrointestinal fistula. Especially, ileorectal fistula due to rectal cancer is a very rare condition. There are only a few reports in the literature.

Fistula formation in malignant tumors of the gastrointestinal tract is considered to occur in two distinct ways. In one type of formation, the tumor grows contiguously to the other organ. In another type, the primary tumor develops a deep ulceration with either a peritoneal reaction or an organization of exudates, which then leads to adherence to adjacent structures; eventually, it perforates into the lumen of the other organ.

The majority of malignant fistulas of the gastrointestinal tract have been diagnosed by radiography. In our case, a barium contrast study revealed that the contrast flowed through the fistula between...
Fig. 1. A barium enema revealed an apple-core lesion in the lower rectum and a fistulous tract leading to the ileum (arrowheads; ileum, arrow; oral side rectal lumen).

Fig. 2. Colonoscopic fiber demonstrated a tumor with a small and deep ulceration in the rectum (arrow). Two fistulous tracts leading to the ileum were seen (arrowheads).

Fig. 3. A cross section of the fistulous tract and the rectum showed a contiguous carcinomatous invasion from the rectum (arrow) to the ileum wall (arrowheads).

the ileum and the rectum. Colonoscopy, through which we could observe the fistulous lumen, was more diagnostic.

Colorectal cancer forming a fistula is characteristic in that it scarcely occurs in patients having liver metastasis, peritoneal dissemination, or lymph node metastasis.\(^7,8,10\) Therefore, it is thought that a curative operation is possible by performing extended tumor resection with fistula-forming organs and that a good prognosis is expected.

Conflicts of interest

None.

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None.

Ethical approval

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

References