A Case of Ileus Caused by Implantation of Cancer after Surgical Treatment of Bile Duct Carcinoma

HISAFUMI KINOSHITA, SHINJI SATO, MITSUO HASHIMOTO, KOTARO HASHINO, TSUYOSHI TAMAE, MASAO HARA, HIROYASU IMAYAMA AND SHIGEAKI AYOYAGI

Department of Surgery, Kurume University School of Medicine, Kurume 830-0011, Japan

Summary: We encountered a patient with an ileus caused by implantation of cancer cells after surgical treatment of bile duct carcinoma. The patient was a 55-year-old male diagnosed as having cancer in the lower bile duct who underwent pancreateoduodenectomy in March 1996. The comprehensive curability was B. The patient experienced nausea and vomiting and was diagnosed as having ileus in October 1998. The symptoms were alleviated by medical treatment. Because ileus symptoms recurred in December 1998 but were not alleviated by medical treatment, the patient was hospitalized in Kurume University Hospital for surgery. A mirror reflection was observed by plain radiography of the abdomen. Ultrasonography (US) revealed dilation of the intestinal duct and hypertrophy of the intestinal wall. An ileus tube was inserted but the symptoms did not improve, and therefore, the patient underwent surgery in February 1999. Upon laparotomy, a node of milk white color about 2 cm in size was found in the region coinciding with the enhancement on CT images, and part of the intestinal duct was found to be folded and adhered to the lower surface of the liver. No recurrence was observed in the liver, peritoneum, and lymph nodes. The tumor was excised together with part of the intestinal duct and liver to remove the ileus. At present, the patient is alive without recurrence. Because recurrence of cancer by implantation of cancer cells is often localized in a limited region, early diagnosis and excision are important.

Key words bile duct carcinoma, implantation, ileus

INTRODUCTION

In the recurrence of bile duct carcinoma, excision of the lesions is usually difficult, and the prognosis is very poor. Bile duct carcinoma often occurs as obstructive jaundice, and percutaneous transhepatic biliary drainage (PTBD) is preoperatively performed. There have been several reports in which a local recurrence was observed on the peritoneum at the site where the PTBD tube had been inserted, which could then be excised. We encountered a patient with ileus caused by implantation of cancer cells after surgical treatment of bile duct carcinoma, in whom the ileus could be removed.

CASE REPORT

The patient was a 55-year-old male who was diagnosed as having cancer in the lower bile duct and underwent pancreateoduodenectomy in August 1996. The patient experienced nausea and vomiting and was diagnosed as having ileus by a local physician in October 1998. The symptoms were alleviated by medical treatment. Because ileus symptoms recurred in December 1998 but were not alleviated by medical treatment, the patient was hospitalized in Kurume University Hospital for surgery. His height was 162 cm, and body weight was 62 kg. The patient had anemia in the palpebral and bulbar conjunctiva, but no jaundice and palpation of superficial lymph nodes were noted. The patient had swelling over the entire
abdomen, tenderness and a decrease in intestinal murmur. A biochemical examination of blood revealed an elevation of GOT and GPT and a slight reduction of albumin and cholesterol levels. The tumor marker, CEA, was slightly elevated (Table 1). Aerossis and mirror reflection were observed in the small intestine in the median to the right upper abdomen by plain radiography of the abdomen (Fig. 1). US revealed dilation of the intestinal duct and hypertrophy of the intestinal wall. Upon injection of gastrograffin via the ileus tube that had been inserted, its retention and stagnation were observed in the right upper abdomen and small intestine by plain radiography of the abdomen. The ileus was considered due to constriction of the lower small intestine (Fig. 2). An enhanced lesion of about 2 cm in size was detected by contrast CT on the lower surface of the liver in contact with the intestinal duct.

**TABLE 1.**

<table>
<thead>
<tr>
<th>Laboratory data on admission</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBC 7,500/µl</td>
</tr>
<tr>
<td>RBC 486 × 10³/µl</td>
</tr>
<tr>
<td>Hb 16.3 g/dl</td>
</tr>
<tr>
<td>Ht 47.1 %</td>
</tr>
<tr>
<td>Pht 26.6 × 10³/µl</td>
</tr>
<tr>
<td>GOT 39 U/l</td>
</tr>
<tr>
<td>GPT 58 U/l</td>
</tr>
<tr>
<td>LDH 408 U/l</td>
</tr>
<tr>
<td>ALP 242 U/l</td>
</tr>
<tr>
<td>γ-GTP 47 U/l</td>
</tr>
<tr>
<td>ChE 70 U/l</td>
</tr>
<tr>
<td>TP 6.7 g/dl</td>
</tr>
</tbody>
</table>

*Fig. 1. Aerossis and mirror reflection were observed in the small intestine in the median to right upper abdomen by plain radiography of the abdomen.*

*Fig. 2. Upon injection of gastrograffin via an ileus tube that had been inserted, its retention and stagnation were observed in the right upper abdomen and small intestine by plain radiography. The ileus was considered due to constriction of the lower small intestine.*

*Fig. 3. An enhanced lesion of about 2 cm in size was detected by contrast CT on the lower surface of the liver in contact with the intestinal duct.*
Fig. 4. Surgical schema and photographs during surgery
a) Observation during laparotomy: The small intestine at the position about 150 cm toward the mouth from the end of the ileum and part of the transverse colon and ascending jejunum were folded and adhered to the lower surface of the liver.
b) The intestinal duct of about 8 cm in length including the tumor, part of the transverse colon and ascending jejunum, and the liver were excised.
c) After excision of the liver, the excised site was cauterized during surgery.

Fig. 5. Pathohistological observation.
a) The tissues of bile duct carcinoma collected in the first surgery.
b) The tumor collected in the resurgery: Adenocarcinoma with rich intestinal tissues proliferated mainly in the lower layers of mucosa of the small intestine.
the liver in contact with the intestinal duct (Fig. 3). Because the symptoms were not improved by treatment using the ileus tube, we performed surgery, considering the possibility that the ileus was caused by recurrence of bile duct carcinoma. Upon laparotomy, a node of milk white color about 2 cm in size was found in the region coinciding with the enhancement on CT images. The small intestine at the position about 150 cm toward the mouth from the end of the ileum and part of the transverse colon and ascending jejunum were folded and adhered to the lower surface of the liver. No metastasis was observed in the liver, peritoneum, and lymph nodes. Because the recurrence was in a single node, we considered that a good prognosis would be obtained by local excision, and excised a section of the intestinal duct of about 8 cm in length including the tumor, by local excision, and excised a section of the intesti-

---

REFERENCES

ILEUS CAUSED BY IMPLANTATION OF CANCER CELLS