Chemotherapy Related Late Enterocutaneous Fistula Following Laparoscopic Total Gastrectomy for Cancer

Mide Kanserinde Laparoskopik Gastrektomi Sonrası Kemoterapiye Bağlı Gelişen Geç Fistül

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ABSTRACT

Postoperative adjuvant chemotherapy is known to be effective for survival in advanced gastric cancer. However, some severe gastrointestinal side effects during chemotherapy can interrupt adjuvant therapy. A 47-year-old woman underwent laparoscopic total gastrectomy for advanced stomach cancer (T4N2M0: Stage IIIB). Cisplatin and 5-fluorouracil chemotherapy was started postoperatively. During the third course of chemotherapy (on the postoperative 102 day) some gastrointestinal content including bile appeared through the healed laparoscopic trocar site. Computed tomography revealed a retroperitoneal abscess connected with this fistula. After percutaneous drainage of the abscess, the fistula ceased spontaneously. The patient was evaluated for chemotherapy again. Chemotherapy-induced gastrointestinal fistula can be seen postoperatively and this can interrupt the patient's chemotherapy process.

Key Words: Laparoscopy, minimally invazive surgery, stomach, carcinoma, postoperative complications.

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ÖZET

İleri evre mide kanserinde postoperatif kemoterapinin sağ kalım üzerinde oldukça etkili olduğu bilinmektedir. Ancak kemoterapiye bağlı bazı gastrointestinal yan etkiler gelişebilmektedir. Bizim olgumuz, 47 yaşında bayan olup, ileri evre mide kanseri nedeniyle laparoskopik total gastrektomi uyguladığımız hastaydı. Kanser evresi T4N2M0, evre 3B olan hastaya cisplatin ve 5-florourasil kemoterapisi başlandı. Hasta taburcu olduktan sonra 80. günde, kemoterapinin üçüncü kürünü alırken laparoskopik trokar yerinden safralı drenajı oldu. Ayrıca retroperitoneal absesi de mevcuttu. Abseye yönelik perkütan drenaj uygulandı ve fistül konservatif tedaviyle geriledi ve durdu. Hasta medikal onkoloji tarafından yeniden kemoterapi için değerlendirmeye alındı. Kemoterapiye bağlı gastrointestinal sistem fistülü postoperatif dönemde görülebilir. Bu beklenmedik komplikasyon hastanın kemoterapi sürecini engelleyebilir.

Anahtar Sözcükler: Laparoskopi, minimal invaziv cerrahi işlemler, mide, karsinom, postoperatif komplikasyonlar

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INTRODUCTION

Curative treatment of gastric cancer is surgery, however, postoperative recurrences in the form of local and distant metastases in advanced tumors are not rare. Postoperative chemotherapy in advanced gastric cancer is recommended to prolong the survival, but some severe gastrointestinal side effects such as gastrointestinal bleeding, perforation, and fistula in patients with chemotherapy can be observed. Our aim was to present a case of late enterocutaneous fistula due to postoperative adjuvant chemotherapy in an advanced stage gastric cancer.

CASE REPORT

A 47-year-old female underwent upper gastrointestinal endoscopy because of fullness, oral intolerance, vomiting and weight loss. There was a large mass in the entire stomach and biopsy was compatible with adenocarcinoma. Computed tomography revealed a locally advanced gastric cancer with enlarged lymph nodes but without distant metastasis. Neoadjuvant chemotherapy planned but could not be performed because of her inadequate oral intake (obstructive tumor) and a laparoscopic palliative surgery was scheduled. Laparoscopic exploration revealed a mass covering the entire stomach (linitis plastica) and the tumor was invading the pylorus. After division of the pylorus with a linear staple, the staple line opened due to the thickened wall of the duodenum. The duodenum was then closed by intracorporeal running sutures in double layer 3/0 polypropylene. Laparoscopic total gastrectomy and Roux-en-Y anastomosis were completed without any other problem. No lymph node dissection was performed because of the palliative resection aim. In the postoperative period a duodenal fistula developed but closed with conservative treatment spontaneously and the patient was discharged in a good condition and referred to medical oncology department. Pathology was reported as poorly cohesive adenocarcinoma, invading the visceral peritoneum and metastases were present in six of the 17 lymph nodes (T4N2M0: Stage IIIB). The patient was scheduled for docetaxel-cisplatin-fluorouracil chemotherapy. At the first dose of chemotherapy, only cisplatin and fluorouracil were given by reason of development of docetaxel allergy. After 102 days of the operation during the third course of chemotherapy, chemotherapy was discontinued upon the occurrence of nausea and vomiting, and the onset of bilious content from the healed upper right trocar site. There was no evidence of acute abdominal signs or findings. Computed tomography revealed a fistula tract associated with the duodenum (Figure 1) and the right retroperitoneal 8.5 × 5.0 cm abscess (Figure 2). After percutaneous drainage of the abscess, the fistula was closed in two weeks. The patient was sent back for chemotherapy again.

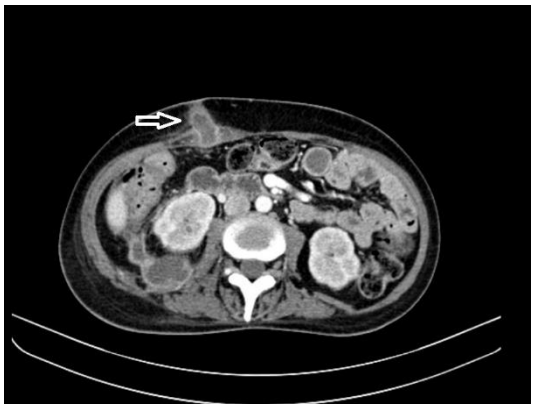

Figure 1: Fistula tract on computed tomography.

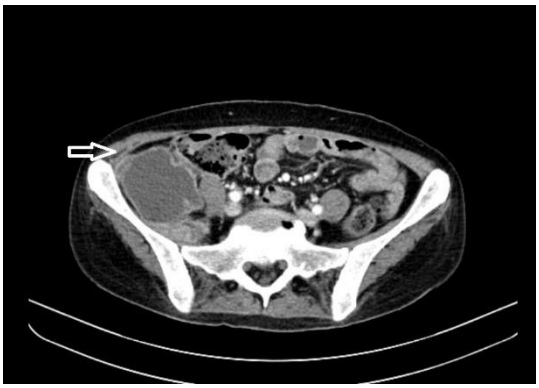

Figure 2: Retroperitoneal abscess on computed tomography.

DISCUSSION

It is well-known that chemotherapy alone can cause gastrointestinal perforations. The incidence of perforation in 1856 patients receiving palliative chemotherapy for advanced stomach cancer was reported to be 1.7% (1). The majority of patients (72%) had developed the perforation in the first course of chemotherapy and 87.5% were receiving combined chemotherapy before perforation. Four patients in those large series were receiving 5-fluorouracil/cisplatin alone or combination with docetaxel like our patient. 5-fluorouracil and cisplatine are thought to cause vasospasm and/or decrease in fibrinolytic activity, resulting in decreased blood flow to the mucosa and it can lead gastrointestinal perforation (2). Docetaxel can potentiate this adverse effects. In a T4 esophageal cancer study, 5-fluorouracil / cisplatin regimens with and without docetaxel were compared in two groups. Tumor perforation rates for 5-fluorouracil/cisplatin with and without docetaxel 18% and 4% respectively (3).

The development of perforation and fistula during chemotherapy is a life-threatening condition. Because these patients are both weak (anemia, hypoproteinemia) and prone to sepsis due to immunosuppression. Morbidity and mortality in perforations when receiving chemotherapy in gastric cancer can be high. We previously experienced in an ileal perforation due to chemotherapy of regorafenib following colon cancer surgery (4). We performed a laparoscopic right hemicolectomy for a hepatic flexure tumor (T4aN0M0: Stage IIB) in a 60-year-old female. Chemotherapy was scheduled postoperatively and 50 days after surgery, an emergency laparotomy was necesseray for a gastrointestinal perforation. The perforation was, on the blind-ended loop side of the ileocolonic anastomosis. After repair of the perforation, the post-operative course was uneventful except a superficial surgical site infection and a delay in chemotherapy schedule.

In this case report, the development of an enterocutaneous fistula 102 days after surgery during the chemotherapy course suggested that we focused to a chemotherapy-induced fistula. This unexpected complication postponed the chemotherapy course.

Conflict of interest

No conflict of interest was declared by the authors.

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