Successful Treatment of a Patient with Gastric and Duodenal Metastases from Large Cell Carcinoma of the Lung with Carboplatin and Gemcitabine

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Abstract. A 62-year-old man with large cell carcinoma of the lung underwent a right upper lobectomy and four months later demonstrated a relapse in the stomach and duodenum. He received systemic chemotherapy consisting of carboplatin and gemcitabine. After the first cycle of chemotherapy, the duodenal lesion disappeared, however, the gastric lesion demonstrated no response. Considering the risk of bleeding or perforation, a partial gastroduodenal resection was therefore performed. Subsequently, he received adjuvant chemotherapy with the same regimen. He has since been doing well for 24 months after the recurrence. Although the prognosis for patients with gastrointestinal metastases from lung cancer tends to be extremely poor, treatment with chemotherapy and a metastasectomy have resulted in this patient, achieving a long survival.

Lung cancer is the leading cause of cancer death throughout the world for both men and women (1). Approximately one third of all patients with non-small-cell cancer (NSCLC) have a distant metastasis at the time of diagnosis. Lung cancer frequently metastasizes to the brain, liver, bone, and adrenal gland, while metastasis to the digestive tract is rarely diagnosed before death, unless complications such as bleeding, perforation, or obstruction develop. However, according to postmortem examinations, metastasis to the digestive organs is not rare (2, 3). Ryo et al. reported the frequencies of metastases to the stomach, small intestine, and large intestine to be 3.0%, 2.8%, and 3.1%, respectively (4).

An NSCLC patient who had recurrence in the stomach and duodenum was presented to us. Although the prognosis of patients with gastrointestinal metastases from NSCLC is generally extremely poor, we herein describe a case which has been successfully treated with chemotherapy and a metastasectomy.

Case report

A 62-year-old man had a large cell carcinoma of the lung. He underwent a resection of the right upper lobe at our hospital in March 2004. The pathological stage was IB. Thereafter, he received tegafur/uracil at the outpatient clinic, until July 2004, when he experienced mild abdominal pain. An endoscopic examination of the upper gastrointestinal tract revealed the tumors with central ulceration at the fornix, on the greater curvature of the stomach and the second portion of the duodenum (Figure 1 A, B). The histological diagnosis of both tumors revealed a large cell carcinoma, which was therefore compatible with metastasis from the lung cancer (Figure 2). Examinations using computed tomography scans of the chest and abdomen, magnetic resonance imaging of the brain and bone scintigraphy revealed no other metastatic lesions. Thereafter, the patient was treated with a combination chemotherapy consisting of carboplatin at a dose of 5 x area under the concentration-time curve on day 1 and gemcitabine (1000 mg/m²) on days 1 and 8. After the first cycle of chemotherapy, although the gastric lesion did not respond (Figure 1C), the duodenal lesion markedly regressed (Figure 1D). Since the surface of the gastric lesion became necrotic and seemed to have a risk of bleeding, a partial resection of the stomach and duodenum was performed. After surgery, adjuvant chemotherapy with the same regimen was

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conducted. During the completion of this report, the patient has been doing well, 24 months after the recurrence.

Discussion

A patient with gastric and duodenal metastases from a large cell carcinoma of the lung was successfully treated with chemotherapy and a metastasectomy. When patients are treated with a palliative resection after the development of serious complications, the prognosis tends to be extremely poor (3, 5, 6). In contrast, a long-term survivor who underwent a palliative resection, while in good general condition, has been reported (6). Therefore, an early diagnosis of metastasis to the digestive organ and a metastasectomy might improve the prognosis, when other metastatic lesions are not found.

Metastasis to the digestive organs is not rare in postmortem examinations (2-4), although usually, patients have almost no symptoms. McNeill et al. have reported that 39% of the patients with large cell carcinoma of the lung had small bowel metastasis and 18.3% had large bowel metastasis (3). Since large cell carcinomas frequently metastasize to the digestive organs, the gastrointestinal tract of such patients should be examined more carefully by histological analysis. If bleeding, perforation or obstruction are recognized, then the patient’s condition may rapidly deteriorate and, as a result, successful treatment may no longer be possible.

Other researchers have reported a risk of gastrointestinal perforation attributable to chemotherapy (7). Accordingly, an early resection of the gastrointestinal metastasis might be recommended to prevent serious complications. In this case, since the patient had a good general condition, he was treated with induction chemotherapy, followed by a surgical resection and adjuvant chemotherapy. Previously, a patient with metastasis to the digestive organs has been reported to have survived 22 months, after only a palliative resection (6), while the patient presented in the present study was still alive 24 months after the recurrence. Based on the above findings, early intensive therapy, including surgery and chemotherapy, might therefore be an effective treatment against gastrointestinal metastasis from lung cancer.

References


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