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Long-term survival of a patient with advanced gastric cancer with paraaortic lymph node metastasis who attained pathological complete response after S-1/CDDP chemotherapy: A case report

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ABSTRACT

INTRODUCTION: Gastric cancer with paraaortic lymph node (PAN) metastasis have unfavorable prognosis. There are no evidence-based preoperative chemotherapy regimens available.
CASE PRESENTATION: A 62-year-old female was diagnosed with advanced gastric cancer and PAN metastasis. We attempted S-1/CDDP chemotherapy in six coursed and total gastrectomy as well as systematic dissection of regional lymph nodes and PAN. Histologically, no cancerous cells were detected in specimens. The patient has been disease-free for 5 years since the surgery.
DISCUSSION: Long-term survival case of gastric cancer with PAN metastasis attaining pathologically complete response is extremely rare. It is possible that preoperative S1/CDDP with surgery might be a standard treatment strategy for gastric cancer with PANs.
CONCLUSION: We report herein a rare case of gastric cancer with PAN metastases who achieved a 5-year survival after S-1/CDDP chemotherapy and surgery.

1. Introduction

Gastric cancer with paraaortic lymph node (PAN) metastasis is classified as distant metastasis and as Stage IV under the 7th Union for International Cancer Control (UICC^{7th}) guidelines. Furthermore, surgery for Stage IV gastric cancer is not indicated according to the Japanese gastric cancer treatment guidelines [1]. The prognosis for stage IV gastric cancer is extremely poor [2] and currently, there are no evidence-based preoperative chemotherapy regimens available. Here, we report a patient with advanced gastric cancer with PAN metastasis who showed pathologically complete response and favorable outcomes after S-1/CDDP chemotherapy.

2. Case presentation

A 62-year-old woman visited her previous doctor complaining of epigastric discomfort. She was referred to our hospital for a complete examination. She had an unremarkable medical history without anorexia and loss of weight. Her height was 156 cm, weight was 54 kg, and body surface area was 1.52 m^2. We measured levels of carcinoembryonic antigen (15.4 ng/mL) and carbohydrate antigen 19–9 (normal), which are tumor markers. Esophagogastroduodenoscopy (EGD) indicated the presence of a Borrmann type 3 tumor in the lesser curvature of the stomach (Fig. 1A), and histological biopsy specimens showed poorly differentiated adenocarcinoma. Abdominal computed tomography (CT) demonstrated enhanced and thickened gastric wall with multiple metastatic regional lymph nodes. Lymph nodes along the celiac artery and the lesser curvature were remarkably swollen (i.e., bulky N2) (Fig. 2A). Metastasis to PAN (No. 16a2) was also observed (Fig. 2B). We diagnosed the patient with unresectable gastric cancer (M, Less, Borrman type 3, cT4a, cN3a, cH0, cP0, cM1, cStage IV according to UICC^{7th}) and attempted to perform treatment with S-1 (tegafur, gimestat, and otastat potassium) with CDDP (cisplatin) chemotherapy. We anticipated that the tumor would be downstaged as a result of the chemotherapy. S-1 (120 mg/body/day) was given orally twice daily for the first 3 weeks of a 4-week course. CDDP was given as an

Abbreviations: PAN, paraaortic lymph node; UICC, Union for International Cancer Control; EGD, esophagogastroduodenoscopy; CT, computed tomography; pCR, pathological complete response.

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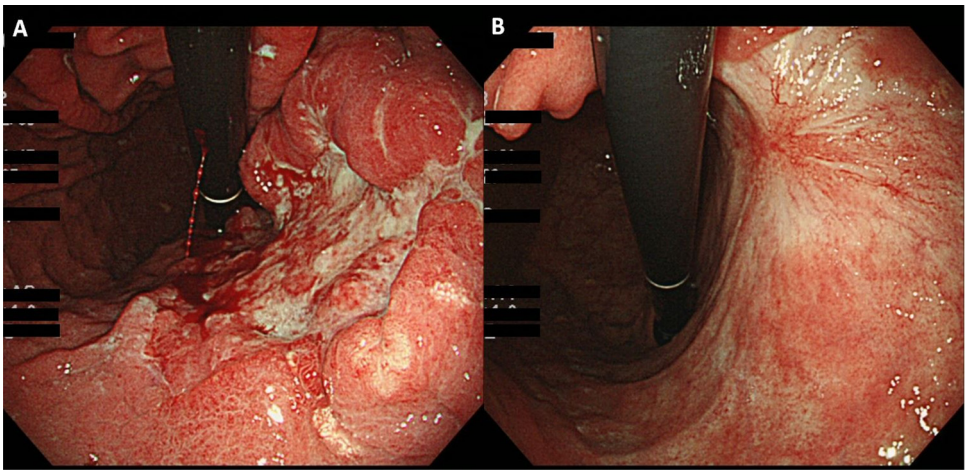

Fig. 1. (A) EGD before chemotherapy revealed Borrmann type 3 cancer in the lesser curvature of the stomach. Histological examination of the biopsy showed poorly differentiated adenocarcinoma. (B) EGD after chemotherapy showed a scar-like flat lesion in the lesser curvature of the stomach. Cancer cells were not found in the biopsy specimen.

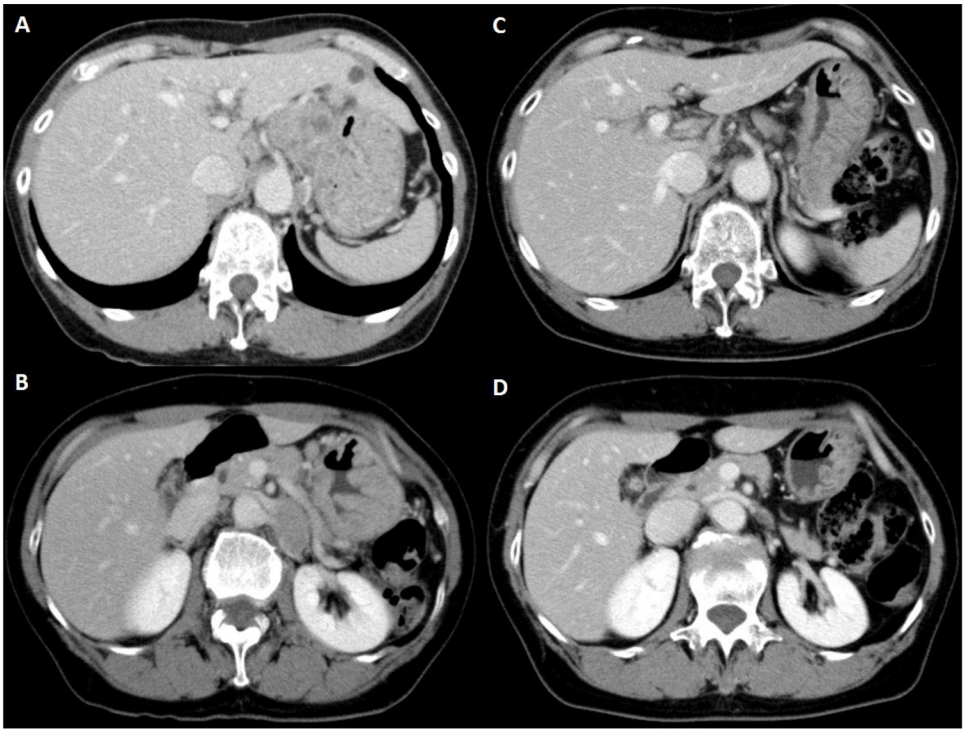

Fig. 2. Abdominal enhanced CT before chemotherapy demonstrated (A) bulky lymph nodes along the celiac artery (No.9 [33 mm]) and the lesser curvature (No.3 [42 mm]). (B) Paraaortic lymph nodes (No.16a2) were swollen (27 mm). CT after chemotherapy revealed (C) that No.9 disappeared and that No.3 shrunk. (D) No.16a2 was also reduced in size.

intravenous infusion of 90 mg/body/day on day 8 of each course. She completed 6 courses of this regimen without severe adverse effects. EGD after chemotherapy demonstrated that the gastric lesion was scarred (Fig. 1B). Additionally, abdominal CT revealed a reduction in the size of the regional lymph nodes (Fig. 2C), especially the PAN (Fig. 2D); this was considered an indication for surgery. She underwent surgery 55 days after the administration of the last dose of chemotherapy. We performed total gastrectomy and D2 lymphadenectomy as well as paraaortic lymph node dissection with Roux-en-Y reconstruction. The surgery lasted for 341 min and the total blood loss was 734 ml. No macroscopic metastases were found in the liver and peritoneum, including a negative result of peritoneal washing cytology (CY0). Macroscopically, the gastric lesion in the resected specimen was scarred (Fig. 3). Histopathology, no cancerous cells were detected in the scarred region of the stomach. The number of dissected lymph nodes was 47, and there were no metastatic lymph nodes, including PANs. The therapeutic effect of the chemotherapy was Grade 3.

The postoperative course was uneventful, and the patient was discharged from our hospital on postoperative day 14. We simply followed up her without adjuvant chemotherapy, and she remained disease-free for 5 years after surgery.

3. Discussions

Stage IV gastric cancers have an unfavorable prognosis. The Japanese gastric cancer association reported that the 5-year sur-