A Case of Isolated Paraaortic Lymph Node Recurrence from Colon Cancer Successfully Treated with Chemoradiotherapy

Seiei YASUDA, Hiroko KAMATA, Takashi MACHIDA, Kazutake OKADA, Akira TANAKA, Toshiyuki SUZUKI, Sotaro SADAHIRO and Yukio OHIZUMI

INTRODUCTION

Isolated paraaortic lymph node (PALN) recurrence from colorectal cancer is rare and has no established treatment. A 56-year-old woman was referred to our hospital for the treatment of PALN recurrence in June 2005. She had undergone right hemicolectomy for ascending colon cancer two years earlier. The pathological diagnosis in 2003 was a well-differentiated adenocarcinoma with positive PALN metastasis in 3 of 4 dissected nodes (T3, N1b, M1a, stage IVa). At our hospital, chemoradiotherapy was started, with the radiation field determined from positron emission tomography (PET) images. Oral tegafur/uracil (600 mg/day) plus leucovorin (75 mg/day) therapy was also started. Radiotherapy (1.5 Gy/fraction, total of 45 Gy) was completed in August 2005, while oral chemotheraphy was discontinued 3 weeks after it was started due to diarrhea and epigastric discomfort. The serum carcinoembryonic antigen level was 193 ng/ml (N < 5) before treatment and decreased to within normal limits 3 months after initiation of chemoradiotherapy. Complete remission was confirmed by computed tomography (CT) and PET in December 2005 and has continued for more than 6 years. This case shows that chemoradiotherapy is potentially curative for PALN recurrence from colorectal cancer. To our knowledge, this is the first report of more than 5 years disease-free survival in a patient with PALN recurrence from colon cancer treated with chemoradiotherapy.

Key words: colorectal cancer, paraaortic lymph node recurrence, radiotherapy, chemoradiotherapy, PET/CT

CASE REPORT

A 56-year-old woman was referred to our hospital for the treatment of PALN recurrence in June 2005. She was referred to our hospital in June 2005 for further treatment of the PALN recurrence. She had undergone right hemicolectomy for ascending colon cancer in March 2003. The pathological diagnosis at that time was a well-differentiated adenocarcinoma (grade 1 based on the Common Terminology Criteria for Adverse Events v4.0). Three months after initiation of chemoradiotherapy (September 2005), the patient’s serum CEA level, which was 193 ng/ml (N < 5) before treatment (June 2005), decreased to within normal limits (Fig. 2) and remarkable tumor shrinkage was apparent on computed tomography (CT) scans (Fig. 3). Complete remission was confirmed by CT and PET in December 2005. During January and July 2006, oral UFT/LV was continued. She had undergone no further treatment. Complete remission was confirmed by computed tomography (CT) scans (Fig. 3). Complete remission was confirmed by CT and PET in December 2005.
has lasted for 6 years, as of December 2011.

**DISCUSSION**

PALN is classified as nonregional or distant LN in colorectal cancer. However, during surgery for primary colorectal cancer, PALN is occasionally dissected. Synchronous PALN metastasis is observed during surgery in 2.1% and 1.9% of cases of sigmoid colon cancer and rectal cancer, respectively, according to a multi-institutional questionnaire study conducted by the Japan Society of Coloproctology [1]. According to this study, PALN dissection was performed, to some extent, with curative intent in as many as 75% of the surveyed institutions and the procedure was therefore assumed to be beneficial in patients with sigmoid colon cancer with PALN involvement [1].

Unlike synchronous PALN metastasis, metachronous PALN metastasis rarely becomes a main target of treatment. As yet, no standard for the treatment of PALN recurrence has been established. PALN recurrence is often accompanied by metastasis to other sites, although Min et al. [2] reported that isolated PALN recurrence was identified in only 1.3% (38/2916) of patients after curative resection of colorectal cancer. If PALN recurrence is deemed localized and resectable, it can be targeted for surgical treatment, as in the case of isolated liver or lung metastasis. Five-year survival rates of 30–40% are seen with resection of liver metastasis and 48% with resection of lung metastasis [3]. Surgical salvage of PALN recurrence, even if it is an aggressive resection of adjacent organs including the aorta, is feasible with acceptable morbidity [4]. The propensity for further recurrence after salvage surgery appears to be high [2, 4, 5], but disease-free survival for more than 5 years has been observed in some patients [5–7]. The determination of prognostic factors is required to select those patients most likely to benefit from lymphadenectomy [7].

To our knowledge, no published reports have indicated more than 5 years disease-free survival following chemotherapy alone in patients with PALN recurrence from colon cancer. In the study of Min et al., 13 patients with isolated PALN recurrence after curative resection of colorectal cancer who were treated with chemotherapy (oxaliplatin and/or irinotecan-containing chemotherapy) eventually developed mul-
tiple metastases in other organs. However, the authors emphasized that many of the patients had not received the most up-to-date and potentially beneficial forms of chemoradiotherapy [2]. Chemotherapy for colorectal cancer has rapidly progressed following the introduction of monoclonal antibody agents [3]. With recent neoadjuvant chemotherapy for rectal cancer, as many as 27% patients have shown a complete pathological response [8]. Neoadjuvant chemotherapy with salvage surgery may be a new approach to the treatment of PALN recurrence [4].

Radiotherapy in conjunction with surgery has been used widely in the treatment of rectal cancer [9]. However, its reported application to PALN recurrence from colorectal cancer is rare, and its survival benefit remains unknown. Kim et al. [10] reported 7 patients with PALN recurrence from rectal cancer after curative resection. One patient remained disease-free for 26 months and another was alive with recurrence after 70 months. Their preliminary study suggested that selected PALN recurrence could be potentially salvaged by radiotherapy. In another study, 6 of 46 patients (13.0%) who received preoperative chemoradiotherapy for rectal adenocarcinoma had a complete pathological response [11]. The effectiveness of radiotherapy can be expected in radiosensitive carcinoma. Our patient took UFT/LV for only 3 weeks because of side effects and still had a complete response. In this case, radiotherapy, rather than chemotherapy, seemed to contribute to the complete remission.

PET and PET/CT has contributed to the diagnosis of PALN metastasis [2, 5, 6] and the determination of the radiation field [10]. PET/CT has an established role in the detection of recurrent disease and has been applied to planning radiotherapy [12]. In our patient with a rising CEA level, PET helped to identify PALN metastasis, exclude metastasis at other sites, and better delineate tumor extension in radiation planning.

To our knowledge, this is the first report of disease-free survival beyond 5 years in a patient with PALN recurrence from colon cancer treated with chemoradiotherapy. Chemotherapy [3] and radiotherapy [9] continue to improve, and multi-modality treatments including salvage surgery could further improve the survival of patients with loco-regional recurrence, such as PALN recurrence from colorectal cancer.

REFERENCES
11) Yasuda K, Nirei T, Sunami E, Nagawa H, Kitayama J. Density of CD4(+) and CD8(+) T lymphocytes in biopsy samples can be a predictor of pathological response to chemoradiotherapy (CRT) for rectal cancer. Radiat Oncol 2011; 6: 49–54.