CASE REPORT

A case of early relapsed multiple lung metastases after esophagectomy successfully treated with S-1/cisplatin therapy after docetaxel/5-fluorouracil/cisplatin therapy

Junichi Seike, Takahiro Yoshida, Junko Honda, Takanori Miyoshi, Atsushi Umemoto, and Akira Tangoku

Department of Oncological and Regenerative Surgery, Institute of Health Bioscience, The University of Tokushima Graduate School, Tokushima, Japan

Abstract : A 55-year-old-male patient underwent subtotal esophagectomy for esophageal cancer (pT1b, N0, M0, stage II) in April 2005. The patient received postoperative chemotherapy (docetaxel 40 mg/body, 5-fluorouracil 750 mg/body, cisplatin 10 mg/body : administered every 4 weeks) for 3 months. Six months postoperatively, routine follow up CT demonstrated multiple metastatic tumors in the bilateral lungs. Under the diagnosis of multiple lung metastases, the patient was hospitalized and received intensive chemotherapy with docetaxel 40 mg/ week (day 1), 5-fluorouracil 500 mg/ day (days 1-5), cisplatin 10 mg/ day (days 1-5). After two weeks administration, the patient eagerly hoped for outpatient treatment. The treatment was changed to outpatient chemotherapy with S-1 100 mg/ day (continuous administration for 3 weeks followed by rest for 1 week) and cisplatin 20 mg/ every week. The treatment enabled the patient to keep working. Follow up CT showed disappearance of all tumors two months after TS-1/cisplatin chemotherapy. There were no obvious signs of recurrence 5 months after chemotherapy. The S-1/cisplatin therapy in the outpatient was thought to be one of the effective treatments in maintaining quality of life for the patient. J. Med. Invest. 53 : 321-324, August, 2006

Keywords **:** *esophageal cancer, chemotherapy, lung metastasis*

INTRODUCTION

Chemotherapy is one of the main treatment options for relapsed esophageal cancer. Although low dose FP therapy(combination of 5-fluorouracil and cisplatin) is considered the most effective regimen, the patients require long-term hospitalization and tend toward a remarkable loss of quality of life. So development of the alternative chemotherapy that can maintain both quality of life for the patients and effectiveness in the disease has been expected. We report a case of early relapsed esophageal cancer successfully treated with outpatient S-1 (TS-1®)/cisplatin (CDDP) therapy following docetaxel/5-fluorouracil (5-FU)/CDDP therapy in hospital.

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Address correspondence and reprint requests to Junichi Seike, M.D., Department of Oncological and Regenerative Surgery, Institute of Health Bioscience, The University of Tokushima Graduate School, Tokushima, Japan and Fax : +81-88-633-7144.

CASE

The patient was a 55-year-old-male. He received

subtotal esophagectomy for esophageal cancer (pT1b, N0, M0, stage II) in April 2005. Histopathological diagnosis was moderately differentiated squamous cell carcinoma, sm, ly2, v0, and only one lymph node metastasis was recognized in 106 recR. Therefore the postoperative diagnosis was found to be pT1b, N1, M 0, stage II. As postoperative chemotherapy, the patient received monthly DFP therapy (docetaxel 40mg/body, 5-FU 750mg/body, CDDP 10 mg/body : administered every four weeks) for 3 months with no problem. Six months post operatively, the routine follow-up CT scan demonstrated multiple tumor shadows in the bilateral lungs (Fig. 1). All tumor markers indicated normal values and further examinations showed no other metastasis. Under the diagnosis of multiple recurrence of the esophageal cancer in the bilateral lungs, the patient was hospitalized and planned to receive intensive chemotherapy.

Based on our first choice of chemotherapy for recurrent esophageal cancer, the patient was hospitalized and began to receive weekly DFP therapy (docetaxel 40 mg/week:day1, 5 -FU 500 mg/day: days 1-5, CDDP 10 mg/day : days 1-5 ; continuous administration for 4 weeks followed by rest for 2 weeks). After 2 weeks administration, grade 2 anorexia and grade 2 leukopenia appeared. Although CT scan at this point showed slight reduction of the size of lung tumors (Fig. 2), the patient eagerly hoped for outpatient treatment. After informed consent, the treatment was changed to outpatient chemotherapy with TS-1 100 mg/day (continuous administration for 3 weeks followed by 1 week rest) and CDDP 20mg/ every week. The patient came to our hospital every week for blood examination and the administration of CDDP. Although grade 1 anorexia and grade 2 leukopenia were observed, this treatment regimen allowed the patient to continue working without interruption of the weekly administration. During the course, blood biochemistry did not show any abnormal values.

Follow up CT showed the disappearance of the all tumors 2 months after TS-1/CDDP chemotherapy (Fig. 3). The administration of CDDP was stopped 2 months after the disappearance of all shadows, and the patient has continued to receive only TS-1 100 mg/day (continuous administration for 3 weeks followed by 1 week rest).

There were no obvious signs of recurrence 5 months after the chemotherapy. The clinical course was described in Fig. 4.

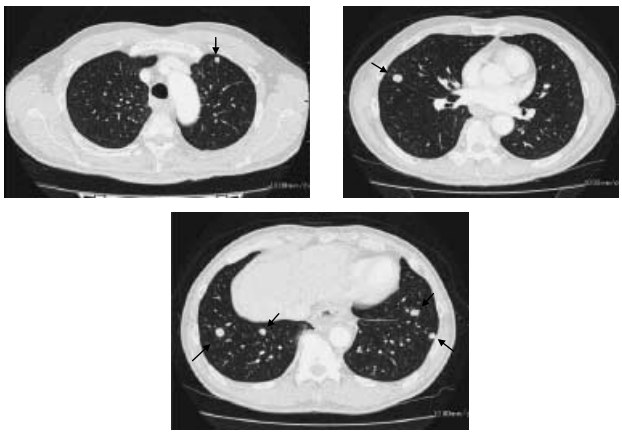


Fig 1. CT finding before chemotherapy demonstrated multiple lung metastases in the bilateral lungs (arrows)

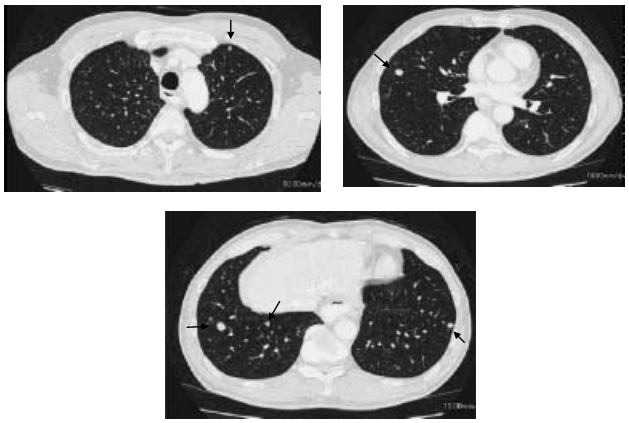


Fig 2. CT finding after 2 weeks of DFP therapy showing slight reduction in the size of lung tumors (arrows)

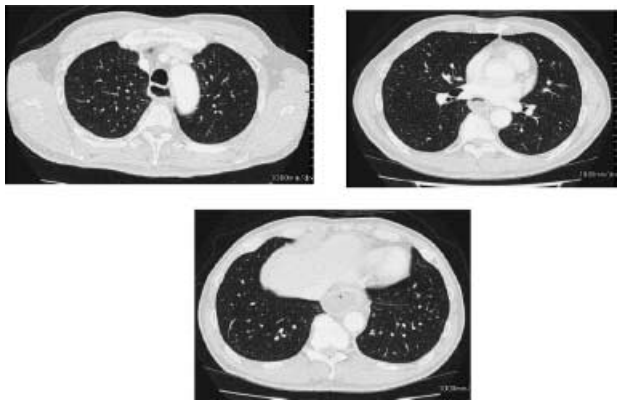
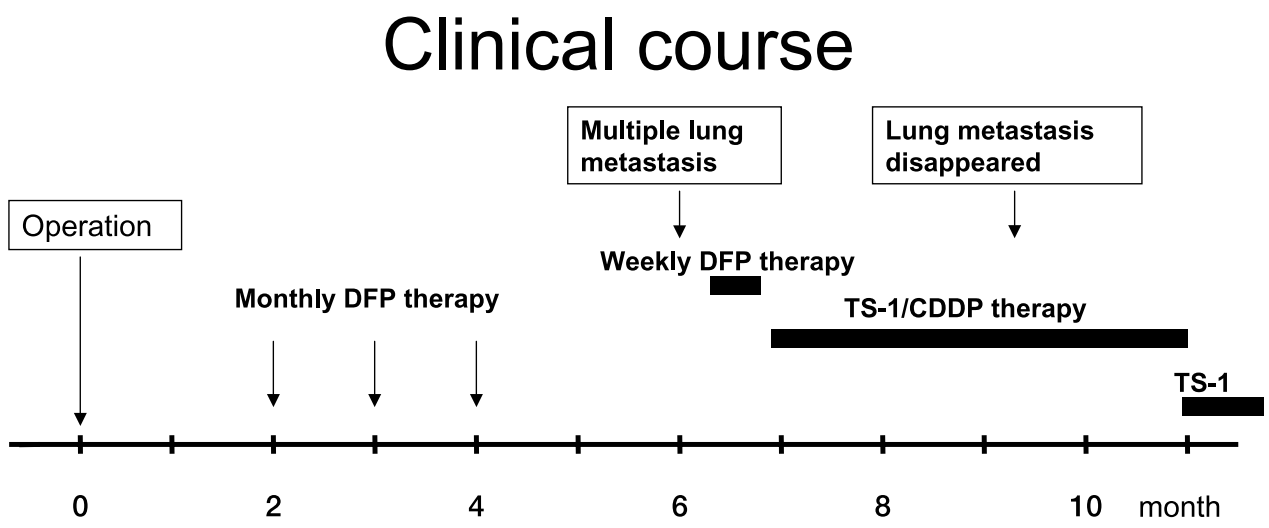


Fig 3. CT finding after 2 months TS -1/CDDP therapy showing the disappearance of all tumors



Monthly DFP therapy : docetaxel (40mg/body day1)、5-FU (750mg/body day1)、CDDP (10mg/body day1)

Weekly DFP therapy : docetaxel (40mg/week day1)、5-FU (500mg/day day1~5)、CDDP (10mg/day day1~5)

TS-1/CDDP therapy : TS-1 100mg/day 3 weeks administration followed by 1 week rest、CDDP 20mg/week

Fig 4. Clinical course

DISCUSSION

Because surgical treatments often can not achieve a cure, chemotherapy or radiotherapy plays a main role in the treatment of recurrent esophageal cancer. While FP therapy has been recognized as the standard chemotherapy for esophageal cancer, some studies about chemotherapy using taxane have examined and reported with good results (1). From 2002, in our institution, docetaxel/5-FU/CDDP therapy (DFP therapy) has been adopted as the first choice chemotherapy for advanced or recurrent esophageal cancer. Our patient also received monthly DFP therapy 3 times as postoperative outpatient treatment, but multiple lung metastases appeared 6 months postoperatively. For intensive chemotherapy, this case was hospitalized and planned to receive weekly DFP therapy. However, the patient eagerly hoped for outpatient treatment during the middle of the treatment period. So we had to consider an effective chemotherapy that could be safely administrated on an outpatient basis.

TS-1 is an oral medicine containing tegafur, gimeracil and oteracil potassium, and also reported a superior anticancer effect compared to that of uracil/tegafur (2). Regarding TS-1 based treatment for esophageal cancer, TS-1/CDDP chemotherapy or TS-1/CDDP with radiotherapy has been reported to show good results (3-7). Hiraki *et al*. (8) have reported the effectiveness of combination TS-1/CDDP chemotherapy for multiple lung metastases. In those reports, CDDP was administered by continuous intravenous drip infusion of 70 mg/m^2 for 24 hours, or daily intravenous drip infusion of 10 mg/m^2 for five consecutive days during which the patient must be hospitalized. Sakaguchi *et al*. (9) have reported a case responding remarkably to TS-1/ weekly CDDP combination chemoradiotherapy and described that administration of TS-1 and weekly CDDP 20 mg/m^2 can be performed on an outpatient basis. Our patient received intravenous drip infusion of CDDP 20 mg/body each week while continuing to keep on working without severe side effects, and as a result, pulmonary metastases disappeared successfully. Because earlier administration of docetaxel might play some roles in this remarkable outcome, further investigation must be made on the biochemical relation between docetaxel and TS-1/CDDP. Although our patient has continued to receive TS-1 only for 3 months (Fig. 4), there have not been any obvious signs of recurrence to date. Thus, TS-1 therapy seems to be useful as maintenance therapy. The TS-1/CDDP therapy in the outpatient is thought to be an effective treatment contributing to maintaining the quality of life for patients.

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