RESECTION OF PULMONARY AND ANTECEDENT HEPATIC METASTASES ARISING FROM COLON CANCER: REPORT OF A CASE

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Abstract: Although surgical resection is a suitable treatment for localized metastases from colorectal cancer, it remains controversial for multiorgan metastases. We present herein a case of a 59-year-old woman, who underwent resection of pulmonary and antecedent hepatic metastases arising from colon cancer. The patient’s postoperative course was uneventful, and there has been no evidence of recurrence for 23 months after the first operation. We report this case and discuss the operative indication for multiorgan metastases arising from colorectal cancer.

Key words: Pulmonary and hepatic metastases, Colon cancer, Surgical treatment

INTRODUCTION

Because the effects of chemotherapy or radiotherapy for treatment of metastases arising from colorectal cancers are uncertain and also because these metastatic lesions have a tendency to be localized, surgical resection is a suitable treatment for metastases). The most frequent sites of metastases from colorectal carcinoma are the liver and the lung. Patients undergoing a curative resection of pulmonary and hepatic metastases from colorectal cancer have a relatively good prognosis. These five-year survival rates range from 38% to 42% in pulmonary metastasis and 25% to 34% in hepatic metastasis. In our institute, similar results have been obtained, and surgical intervention is the first treatment of choice if patients can tolerate surgery. However, surgical treatment for multiorgan metastases from colorectal cancer is still controversial. We present a case with pulmonary and antecedent hepatic metastases arising from colon cancer, and discuss the operative indications.

CASE

In June 1998, a 59-year-old woman was admitted to our hospital for a follow up examination of abnormal X-ray shadows which had been detected on a chest roentgenogram after surgical treatment for colon cancer. The patient had undergone an extended left hemicolectomy, left lobectomy of the liver with lymphadenectomy in the hepatoduodenal ligament, and a cholecystectomy in April 1997. The postoperative pathological diagnosis of colon cancer was moderately differentiated adenocarcinoma (se, n 0, Dukes B; stage IV). After a disease-free interval of 14 months, carcinoembryonic antigen (CEA) levels increased to 6.6 ng/ml, and radiological findings demonstrated abnormal shadows in the bilateral lungs.

Physical examinations on admission revealed that her vital signs were normal, and laboratory tests for hematology, blood chemistry, and urinalysis were within a normal limit. CA19-9 and alpha-fetoprotein levels were within normal range. Forced expiratory volume in one second and the vital capacity were 81% and 96%, respectively. Chest roentgenograms showed two mass shadows in the right middle and the left lower lung fields (Fig.1). Chest CT disclosed a tumor in segment 6 (S6) of the right lung (Fig.2a) and another in the lower lobe of the left lung (Fig.2b). No hilar
lymphadenopathy or pleural effusion was detected. Distant metastasis was limited only to the lung. In August, 1998, a right segmentectomy of S6 and a left lower lobectomy were performed under thoracotomy via the fifth intercostal spaces with axillary excisions. The operation time was 6 hours and 28 minutes, and the blood loss was 587ml. A tumor of S6 in the right lung (2.5 × 2.0 × 2.0cm in size), and another in the left lower lobe (3.7 × 3.5 × 3.0cm in size) were resected. The histological diagnosis was metastatic adenocarcinoma, which was coincident with the primary colon carcinoma.

The postoperative course was uneventful, and the patient was discharged at the 22nd postoperative day. CEA level was normal (3.8ng/ml) and there has been no evidence of recurrence for 9 months following the pulmonary resection.

**DISCUSSION**

The resection of multiorgan metastases arising from colorectal cancer remains controversial, particularly in the surgical treatment of hepatic and pulmonary metastases. In cases of antecedent hepatic metastases, Hara and colleagues reported that there was no significant difference in survival after 3 years in patients either with or without hepatic metastasis. However, there are no reports of patients with hepatic metastasis surviving for more than 5 years. Okumura and co-workers commented that the 5-year survival of patients who underwent a resection of both pulmonary and hepatic metastases was 33%. On the other hand, some arguments against surgery for metastases may center on perioperative morbidity and probability of widespread latent diseases. Mortality and morbidity in metastatic colorectal cancer were reported to be 0% to 4% and 12.2%, respectively in lung resection, and 1.8% to 5.6% and 19.7% to 22%, respectively.
Pulmonary and antecedent hepatic metastases from colon carcinoma

Murata and co-workers\(^9\) reported the criteria for resection of hepatic and/or pulmonary metastases from colorectal carcinoma to be as follows: 1) the primary colorectal carcinoma is controlled; 2) the site of metastasis is limited only to the lung and/or the liver; 3) preoperative examination suggests that removal of tumors with conservation of an adequate amount of normal parenchyma is technically feasible; and 4) the patient can tolerate surgery. According to these criteria, we selected surgical treatment was selected in the present case.

With regard to prognostic factors, Regnard and coworkers\(^2\) described that patients with normal CEA levels and late metachronous metastases were probably surgical candidates. In our case, there were slightly elevated serum CEA levels prior to surgical resection, and the interval time between antecedent hepatic and pulmonary metastectomies was 17 months. Therefore, our patient required a longer and more intensive follow-up. A larger number of patients would be needed in order to establish a strategy for treatment of pulmonary and antecedent hepatic metastases arising from colon carcinoma.

REFERENCES