

Long-term disease-free survival after surgical resection for multiple bone metastases from rectal cancer

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INTRODUCTION

Bone metastasis from colorectal cancer is usually a late manifestation of disease and is indicative of poor patient prognosis^[1-8]. The median survival of patients with bone metastases from colorectal cancer is usually less than 10 mo^[2,3,5]. Here, we describe a patient with multiple bone metastases from lower rectal cancer who was successfully treated with multimodal treatment including surgical resections.

CASE REPORT

A 58-year-old male patient presented with stool caliber change and blood per rectum for 2 mo. Digital examination revealed an annular lesion in the lower rectum, and biopsies confirmed moderately differentiated adenocarcinoma. Computed tomography (CT) and whole body bone scans revealed a circumferential mass in the lower rectum. Metastatic lesions were not detected. His serum carcinoembryonic antigen (CEA) concentration was within the normal range. In May 2005, he underwent a lower anterior resection, followed by systemic infusion of 5-fluorouracil.

Twenty-eight months after initial treatment, a pulmonary metastasis 2 cm in diameter was found in the left lower lung. The patient underwent a left lower lobectomy, followed by 5 cycles of FOLFOX chemotherapy. In June 2008, 9 mo after the lobectomy, follow up radiology revealed two bony metastases, 5 cm and 2 cm in

Abstract

Bone metastasis of primary colorectal cancer is uncommon. When it occurs, it is usually a late manifestation of disease and is indicative of poor prognosis. We describe a patient with multiple metachronous bone metastases from lower rectal cancer who was successfully treated with multimodal treatment including surgical resections and has shown 32 mo disease-free survival. Surgical resection of metastatic bone lesion(s) from colorectal cancer may be a good treatment option in selected patients.

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Key words: Bone metastasis; Colorectal cancer; Surgical resection

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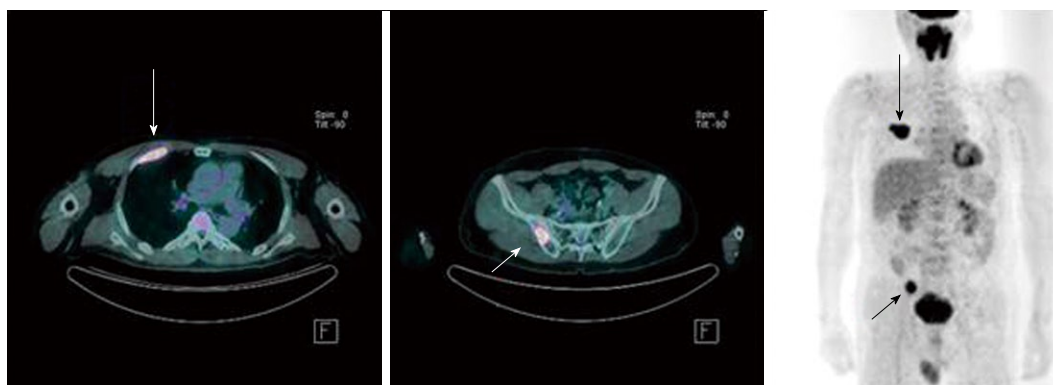


Figure 1 Preoperative whole body positron emission tomography computed tomography showing hypermetabolic metastatic lesions in the right third rib (long arrows) and right iliac bone (short arrows).

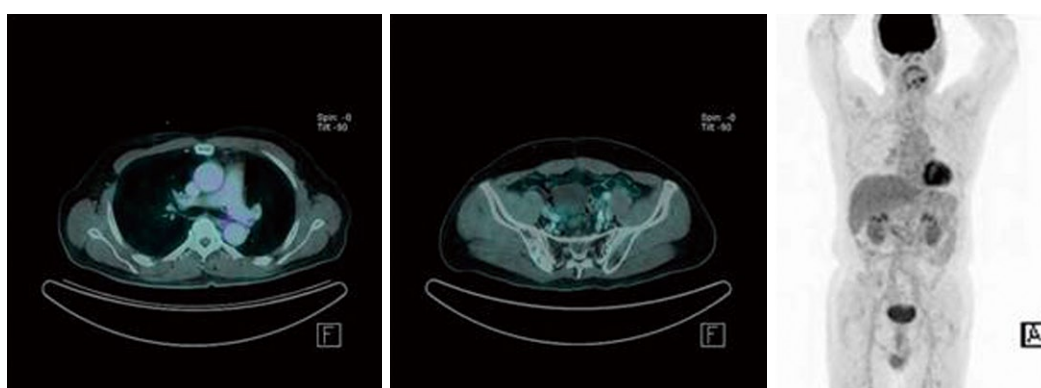


Figure 2 Recent whole body positron emission tomography computed tomography showing no evidence of hypermetabolic lesions 25 mo after surgical resection.

diameter, in the right third rib and right iliac bone, respectively (Figure 1). His serum CEA concentration was 61.3 ng/mL (normal, < 5.0 ng/mL). He underwent a palliative excision of the metastatic rib tumor due to rib pain, followed by radiation therapy (3000 cGy in 10 fractions) for the iliac bone lesion and 3 cycles of capecitabine therapy. In September 2008, we performed an intraoperative radiofrequency ablation on the right iliac bone lesion with curative intent. Recent CT, bone scan, and positron emission tomography/CT showed no evidence of recurrence (Figure 2). The patient remains disease-free more than 32 mo after diagnosis of bone metastases.

DISCUSSION

Bone metastasis from colorectal cancer is a rare (4%-6%) and late manifestation of the disease that is associated with poor patient prognosis^[1-8]. The 5-year survival rate of colon cancer patients with bone metastases is 8.1%^[4], and median survival is usually less than 10 mo^[2,3,5].

Over the past three decades, resection of liver metastases from colorectal cancer has been recognized as beneficial in selected patients. More recently, resection of isolated pulmonary metastases has been found to enhance long-term survival in selected patients^[9-11].

In addition, surgical resection of isolated metastatic

bone lesion(s) has been shown to be a good treatment option, generally resulting in prolonged survival^[12,13].

Our patient remains disease-free more than 32 mo after diagnosis of bone metastases. To our knowledge, no previous case reports have shown disease-free survival of more than 12 mo after surgical resection of multiple metastatic bone lesions from rectal cancer, except for patients with acrometastases (metastases to the hand or foot)^[14]. Although, treatment must be individualized, with only certain patients fit for surgery able to undergo surgical removal of these metastatic lesions, and other effective treatment modalities, the findings in our patient suggest that surgical resection is both beneficial and effective for bone metastases from colorectal cancer. Hopefully, this option will help patients with metastatic bone lesion(s) not only from colorectal cancer but from other cancers. Further evidence and data are needed to define the role and indication of surgical resection of metastatic bone lesion(s), especially from colorectal cancer.

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