Turk J Gastroenterol 2008; 19 (1): 75-76

An unusual primary metastasis of colorectal carcinoma to the forearm

Kolorektal karsinomun önkola nadir primer metastazı

To the Editor

Colorectal carcinoma is one of the leading causes of cancer-related deaths, and mortality is attributed to recurrence and distant metastasis. Liver and lung are the most commonly involved sites for metastasis. Extravisceral metastases, however, such as bone and muscle, are very rare, and early establishment is difficult before the disease becomes advanced (1). Extremity metastasis with skeletal muscle or bone involvement is the most unusual presentation of colorectal carcinoma and indicates systemic disease with recurrence. Nine skeletal muscle metastases of colorectal carcinoma cases have been reported in the literature and only one of them involved the forearm (2-5). A case who presented with forearm skeletal muscle metastasis as the primary site of metastasis five years after resection of the colorectal carcinoma is presented.

A 38-year-old man with mucinous adenocarcinoma of the rectum was treated with rectosigmoid resection, Hartmann's procedure, lymph node dissection and external beam radiotherapy elsewhere. No lymph node or distant organ metastasis was detected and the disease was accepted to be stage B2 according to Dukes classification. After a five-year disease-free period, the patient admitted to our clinic with a 9x5 cm mass on his right forearm. Skeletal muscle invasion at the flexor aspect of the forearm was detected using magnetic resonance imaging (MRI). Incisional biopsy revealed metastasis of mucinous adenocarcinoma. At that time, no other metastasis was detected on whole body evaluation. The lesion was accepted to be the primary and first site for metastasis of the colorectal carcinoma. The entire tumor, which invaded the soft tissues, was resected (Figure 1). Radiotherapy was applied to the forearm following the surgery. Two months after the surgery, a pathological fracture was detected at the proximal radius shaft. The proximal half of the radius was resected by orthopedic surgeons. However, the patient died one and a half years after the detection of forearm metastasis with dissemination of the disease.

The incidence of skeletal metastasis following primary colorectal tumor is 6.6%. Seventeen percent of them are pure osseous metastasis, whereas 83% of cases had skeletal metastasis in combination with liver, lung and brain metastasis (6). To our

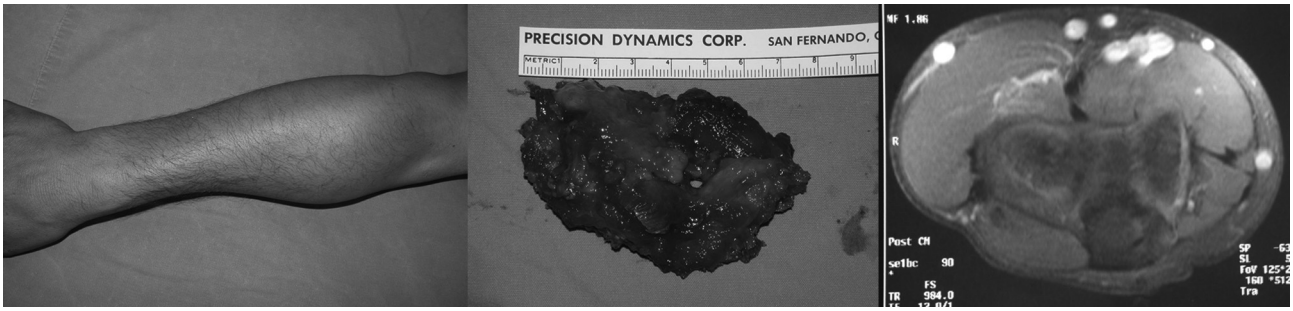

Figure 1. Significant swelling on proximal side of the right forearm (left), intraoperative view of the metastatic mass (middle), and MRI view of the mass between forearm muscle groups.

Address for correspondence: Serhan TUNCER
42. Cad. 451. Sok. 8/5 Çukurambar, Ankara, Turkey
Tel: +90 312 202 64 22 • Fax: +90 312 212 99 08
E-mail: serhantuncer74@yahoo.com

Manuscript received: 16.11.2006 **Accepted:** 10.01.2008

knowledge, the case presented here is the first primary forearm metastasis of colorectal adenocarcinoma in the literature. However, it is always possible that a small metastasis prior to forearm involvement went undetected. Plain radiography, bone scan (the most effective method for bone metastases scanning), MRI and biopsy are the useful methods for diagnosing the bone metastasis (7). Although the survival rates are significantly low, en bloc resection of the rectal carcinoma metastases at the extremities and postoperative local radiotherapy application are recommended as treatment methods for patients with initial metastases in the bone and skeletal muscle.

REFERENCES

1. Willett CG, Tepper JE, Cohen AM, et al. Failure patterns following curative resection of colonic carcinoma. Ann Surg 1984; 200: 685-90.
2. Bonheim DC, Petrelli NJ, Herrera L, et al. Osseous metastases from colorectal carcinoma. Am J Surg 1986; 151: 457-9.
3. Katoh M, Unakami M, Hara M, Fukuchi S. Bone metastasis from colorectal cancer in autopsy cases. J Gastroenterol 1995; 30: 615-8.
4. Laurence AE, Murray AJ. Metastasis in skeletal muscle secondary to carcinoma of the colon – presentation of two cases. Br J Surg 1970; 57: 168-71.
5. Hasegewa S, Sakurai Y, Imazu H, et al. Metastasis to the forearm skeletal muscle from an adenocarcinoma of the colon: report of a case. Surg Today 2000; 30: 1118-23.
6. Kanthan R, Loewy J, Kanthan SC. Skeletal metastases in colorectal carcinomas: a Saskatchewan profile. Dis Colon Rectum 1999; 42: 1592-7.
7. Tuoheti Y, Okada K, Osanai T, et al. Skeletal muscle metastases of carcinoma: a clinicopathological study of 12 cases. Jpn J Clin Oncol 2004; 34: 210-4.

Serhan TUNCER, Kemal FINDIKÇIOĞLU,
Suhan AYHAN, İlker YAZICI,
Osman LATİFOĞLU, Kenan ATABAY

Gazi University, Faculty of Medicine, Department of Plastic Reconstructive and Aesthetic Surgery, Ankara, Turkey