

Why is isolated spleen metastasis a rare entity?

İzole dalak metastazı niçin nadir bir durumdur?

Volkan GENÇ¹, Mohammed AKBARI¹, Ahmet Serdar KARACA¹, Atıl ÇAKMAK¹, Cemil EKİNCİ², Mehmet GÜREL¹

Departments of, ¹General Surgery, ²Pathology, Ankara University, School of Medicine, Ankara

Primary and metastatic tumors of the spleen are uncommon, excluding involvement by lymphoma. Isolated spleen metastasis from other organs is a rare incident. Herein, we report the case of a 59-year-old man who developed isolated splenic metastasis from ascending colon cancer. The patient underwent right hemicolectomy for T3N1M0 tumor of the ascending colon. During the postoperative follow-up, increasing serum level of carcinoembryonic antigen was observed. Furthermore, abdominal computed tomography scan showed a splenic tumor measuring 4 cm. Curative splenectomy was performed. Pathologic investigation confirmed the adenocarcinoma metastasis. The interesting point of our report is that the spleen metastasis arose from the ascending colon. This report is the third described case in the literature of isolated spleen metastasis from a right colon carcinoma.

Key words: Spleen, metastasis, ascending colon

Dalağın primer ve metastatik tümörleri lenfoma tutulumu dışında yaygın olmayan bir durumdur. Klinisyenler, diğer organ tümörlerinden kaynaklanan izole dalak metastazıyla nadiren karşılaşır. Biz burada 59 yaşında çıkan kolon kanserinden kaynaklanan erkek bir olguyu sunduk. Hasta T3N1M0 çıkan kolon tümörü nedeni ile sağ hemikolektomi geçirmişti. Ameliyat sonrası takiplerde serum karsino-embriyonik antijen düzeylerinin arttığı fark edildi. Ardından karın bilgisayarlı tomografisi çekildi ve 4 cm çapında dalak tümörü görüldü. Hastaya küratif splenektomi yapıldı. Patolojik çalışma adenokarsinom metastazı olduğunu doğruladı. Olgumuzun ilginç yanı dalak metastazının özellikle çıkan kolondan kaynaklanmış olmasıdır. Olgumuz literatürde çıkan kolondan kaynaklanan izole dalak metastazlı üçüncü olgudur.

Anahtar kelimeler: Dalak, metastaz, çıkan kolon

INTRODUCTION

Primary and metastatic tumors of the spleen are uncommon, excluding involvement by lymphoma (1, 2). Splenic metastasis is usually a component of the extensive metastases. Clinicians only rarely face isolated spleen metastasis from other organs (3), including from the colon. To date, only 15 case of isolated splenic metastasis from colorectal carcinoma have been reported in the English-language literature.

CASE REPORT

A 59-year-old man was admitted to our hospital in April 2006, with the chief complaint of abdominal discomfort. A computed tomography (CT) scan showed a mass measuring 4 cm located on the ascending colon. A colonoscopy with biopsy was done and pathologic assessment revealed adenocarcinoma. A curative right hemicolectomy with a colocolic anastomosis was performed in May 2006.

The histological investigations of the excised tissue confirmed the existence of a well-differentiated adenocarcinoma. The staging of the lesion was T3N1M0. Thereafter, the patient received adjuvant therapy with FLOX regimen. In the postoperative follow-up, the patient's serum level of carcinoembryonic antigen (CEA) had been normal (<5 ng/ml) until the ninth month after the operation.

The first postoperative CT scan was done in the ninth month and showed neither recurrence nor metastasis. A colonoscopy was done concurrently due to increased serum CEA level. It revealed a single adenomatous polyp at the descending colon. Polypectomy was performed and its pathologic study revealed tubulovillous adenoma. Six months later, the CEA concentration rose to 37 ng/ml. A second abdominal CT was done, which demonstrated a 4 cm tumor in the spleen parenchyma (Figure 1); aside from that solitary splenic metastasis,

Address for correspondence: Volkan GENÇ

Çiğdem Mah. 28. Cad. 13/23

06520 Çankaya, Ankara, Turkey

Phone: + 90 312 310 33 33- 2676 • Fax: + 90 312 310 39 89

E-mail: volkan@medicine.ankara.edu.tr

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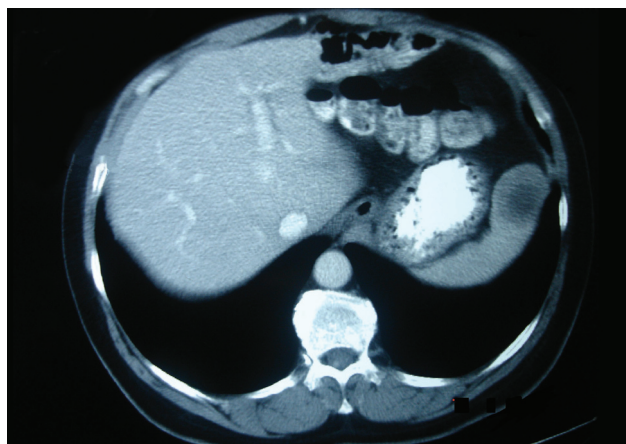


Figure 1. The computed tomographic appearance of the isolated splenic metastasis.

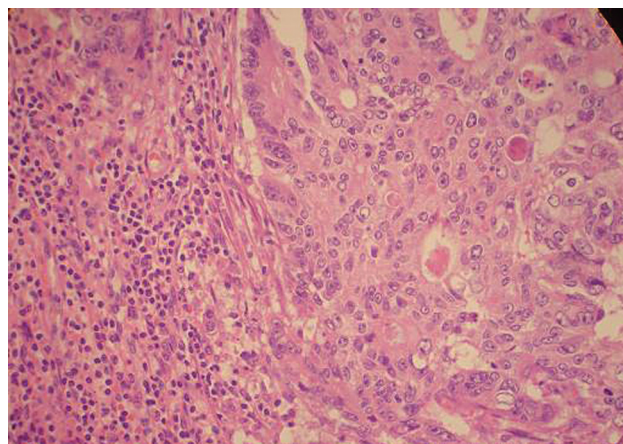


Figure 2. Microscopic appearance of the splenic tumor (hematoxylin-eosin, magnification $\times 40$).

no other metastatic lesions were found. Curative splenectomy was performed. Pathologic studies of the lesion confirmed the adenocarcinoma metastasis without lymph node involvement (Figure 2). The patient is being followed and no relapse has been detected over a two-year period.

DISCUSSION

Malignant melanoma, breast cancer, and lung and ovarian carcinoma are the most common cancers known to metastasize to the spleen. There is a low incidence of spleen metastases from colorectal cancer. The most common sites of metastasis of colorectal cancer are the regional lymph nodes, liver and peritoneum. Lung and bone are rarely involved and usually a component of the extensive metastases (3, 4).

In fact, it is still uncertain whether the rarity of splenic metastasis from other organs is due to splenic immunological functions that prohibit tumoral cell proliferation or if it is a probable result of the characteristic splenic anatomical position and its blood stream state (5). However, the histo-

logical peculiarity of splenic sinusoidal architecture for trapping tumoral cells and the absence of the splenic afferent lymphatics are thought to be the factors responsible for decreasing the possibility of metastasis to the spleen (6).

The splenic metastasis in this case was detected by elevated CEA levels. Although our patient was asymptomatic, the concentration of CEA rose to 37 ng/ml. CT examination was subsequently performed and revealed the splenic metastasis. Close monitoring of the CEA level and careful CT examination can allow early diagnosis of splenic involvement by the tumor.

On the other hand, from 15 total reported cases of isolated spleen metastasis from colorectal cancer in the English-language literature, only 2 cases have arisen from the right colon (7, 8). Although this can emphasize the importance of anatomic relationships of organs for metastasis to the spleen, it weakens the reliability of the hypothesis that intends to relate the microinvasion from the left colon to the spleen as the responsible mechanism of metastasis.

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