

ISOLATED SPLENIC METASTASIS FROM COLON CARCINOMA (CASE REPORT)

M. Fatih KUYUCUOĞLU*, Erdener ÖZER*, Nazif ERKAN**, Hüseyin Uğur PABUÇCUOĞLU*

D.E.U.Faculty of Medicine, Department of Pathology*
D.E.U.Faculty of Medicine, Department of Surgery**

SUMMARY

Metastasis to the spleen from various organs is very rare. At autopsy series, it is found in 6% to 13% of patients who die of cancer. The most common primaries are breast and lung cancers, and skin melanomas. Almost 50% of patients with splenic metastasis have widespread carcinomatosis. Splenomegaly is the major finding making the diagnosis possible initially.

It is reported here a case of isolated spleen metastasis from colon carcinoma without a sign of splenomegaly and found incidentally four months later than the initial diagnosis of the primary carcinoma

Key words: colon cancer, spleen, metastasis

ÖZET

Çeşitli organ tümörlerinden dalağa metastaz çok nadirdir. Otopsi serilerinde, kanserden ölen hastaların %6-%13'ünde görülmektedir. En sık görülen primer organlar meme ve akciğer kanserleri ile derinin melanomlarıdır. Genelde splenik metastazi olan hastaların %50'sinde yaygın karsinomatosiz vardır. Splenomegali önceden tanıya yöneltebilecek başlıca bulgudur.

Burada splenomegali bulgusu olmadan, önceki primer karsinom tanısından dört ay sonra tesadüfen saptanan, kolon karsinomundan dalağa metastaz olgusu rapor edilmektedir.

Anahtar sözcükler: Kolon kanseri, dalak, metastaz

Metastasis from various organs to the spleen is rare. In autopsy studies, splenic metastases are found in approximately 6% to 13% of patients who die of cancer (1). Breast cancer, lung cancer and melanoma are the most common sources (2). Retroperitoneal tumors and pancreatic cancer may reach the spleen by direct extension. At autopsy, in more than 50% of patients, widespread carcinomatosis is present.

We herein reported a case of colon carcinoma who underwent colectomy, and had diagnosis of splenic metastasis 4 months later. Although it is generally accepted that splenic metastases from colorectal carcinoma occur concurrently with widespread dissemination, interestingly spleen appeared to be an isolated metastatic focus after the initial diagnosis and further investigations.

CASE REPORT

A 56 year-old woman underwent left hemicolectomy in December 1995 at Akhisar State Hospital because of ileus related to a sigmoid tumor with a histologic diagnosis of well differentiated adenocarcinoma and seven regional metastatic lymph nodes. At the investigations for postoperative chemotherapy, a splenic mass of 7,5 x 6,5 x 6,0 cm was seen with both ultrasonography and computerized tomography. In March 1996, splenectomy was performed. Careful gross examination of the abdomen during the operation failed to demonstrate metastatic lymph nodes and any other metastases.

Macroscopic examination revealed a gray-white mass containing focal necrosis with dimensions of 7,5 x 6,5 x 6,0 cm. The tumor was located

near the central region separated from the parenchyma of the spleen with a pseudocapsule (Figure 1). In light microscopic examination, neoplastic glands with focal necrosis and intracellular or intraluminal mucin demonstrated with mucicarmen stain was seen (Figure 2, 3). The spleen parenchyma was within morphologic

limits. The histologic findings were compatible with adenocarcinoma of the colon. The patient was treated with postoperative chemotherapy of 5-Fluorouracil plus Folic Acid. Since 18 months after the initial diagnosis, the patient has been fit and well, no recurrence has been seen.

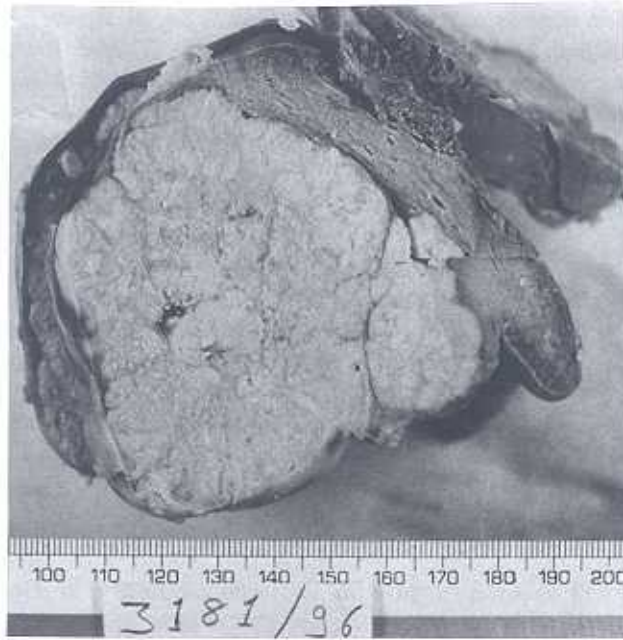


Figure 1. Macroscopic appearance of tumor in the spleen.

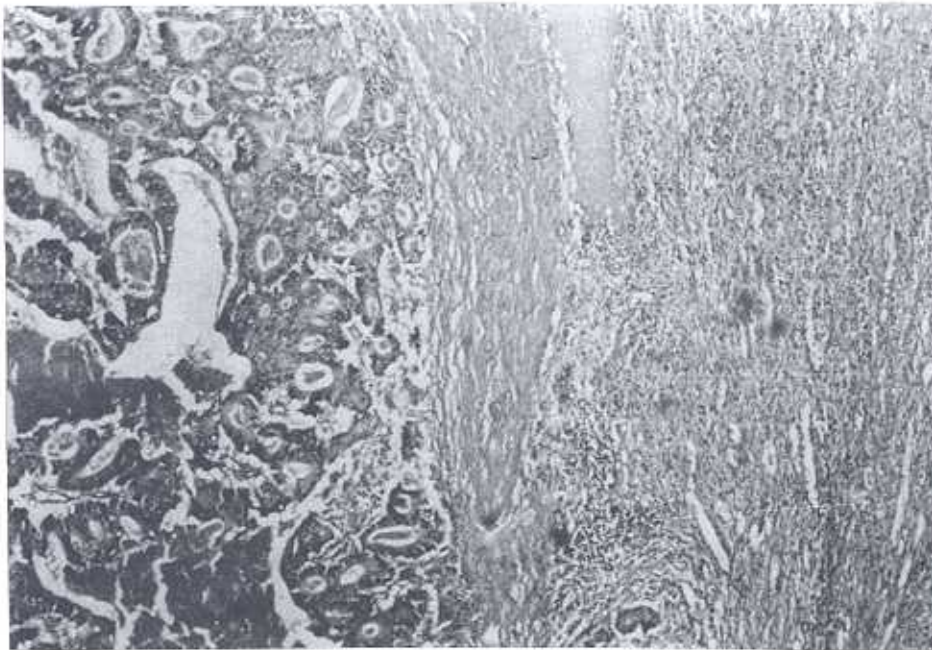


Figure 2. Microscopic examination revealed neoplastic glands ,necrosis and mucin production HE x 200.

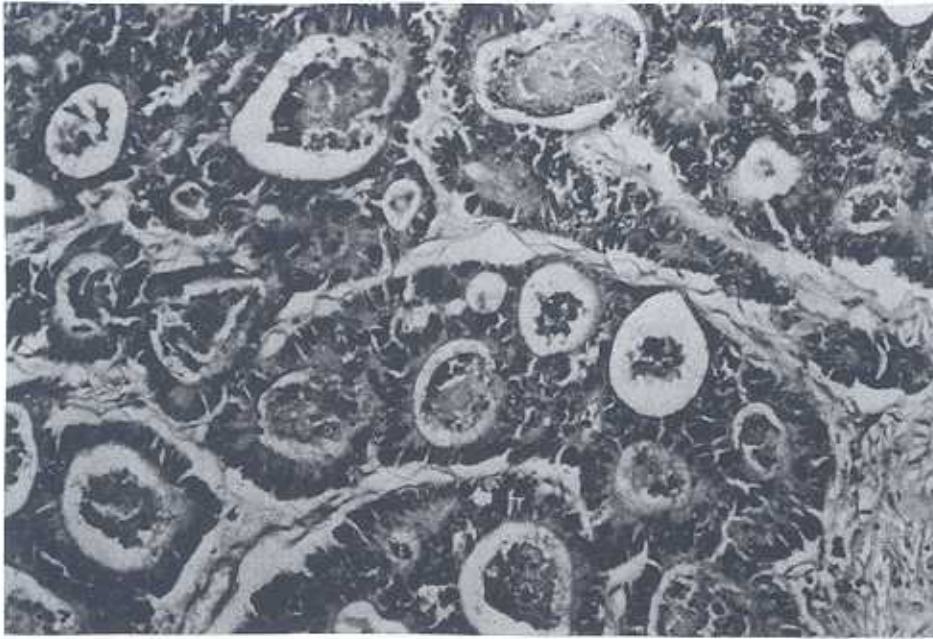


Figure 3. Intracellular and extracellular mucin stained with Mucicarmen. X100.

DISCUSSION

In autopsy studies, the incidence of splenic metastasis from solid tumors varies from 1.6% to 30%. Among these, 50% of patients have widespread carcinomatosis (2). In addition to breast cancer, lung cancer and melanoma, ovary and stomach cancers are the main sources of splenic metastases. However, isolated splenic metastasis is rare. A few number of papers have reported isolated splenic metastasis from gastrointestinal tract cancers. Thomas et al (3) reported an isolated splenic metastasis from colon carcinoma which was the fifth case in the English literature up to 1993 and to our knowledge, so far. Also a calcified splenic metastasis from gastric carcinoma was documented in 1995 by Williams et al (4).

Except for the gastrointestinal cancers, Scintu et al (5) reported a case of splenic metastases from

pulmonary carcinoma. Carrington et al (6) reported five cases of splenic metastases from carcinoma of ovary and in addition to one case of Catona et al (7). The all tumors in the former study were found to be more anaplastic. And also, Hamy et al (8) reported 4 cases of splenic metastases in patients with urothelial carcinoma of the left kidney, adenocarcinoma of uterine body, adenocarcinoma of the left flexure and sigmoid colon. Buzbee and Legha (9) reported spontaneous rupture of spleen in a patient with splenic metastasis of melanoma.

In the series of Klein et al (2), the interval from diagnosis to the development of splenomegaly varied from 20 to 42 months. In the current case, the splenic mass was found incidentally 4 months later than colectomy without any evidence of splenomegaly. Although seven regional lymph node metastasis indicating

lymphatic dissemination, we suggest that splenic involvement was due to hematogenous dissemination. However, further investigations failed to demonstrate any metastasis at other distant organs. Marymount and Gross (10) suggested that splenic metastasis arises from cells that have been conveyed to that organ by the arteries. There are two theories being postulated to account for this condition (2):

1. A humoral substance in the spleen, "splenic factor" destroys all tumor cells that reach the organ.

2. The contraction in the spleen force the blood from the sinusoids into the splenic veins, keeping tumor cells in constant motion.

Neither theory explains satisfactorily the resistance of the spleen to metastatic involvement.

To our knowledge, the present case is the first one in the Turkish literature as an isolated splenic metastasis from colon carcinoma without any sign of splenectomy. The general view is that carcinomatous metastases in the spleen do not cause splenomegaly, are not clinically significant in life and are usually detected at autopsy.

REFERENCES

1. Cummings OW, Mazur MT. Breast carcinoma diffusely metastatic to the spleen. A report of two cases presenting as idiopathic thrombocytopenic purpura. *Am J Clin Pathol* 1992; 97: 484-489.
2. Klein B, Stein M, Kuten A et al. Splenomegaly and solitary spleen metastasis in solid tumors. *Cancer* 1987; 60: 100-102.
3. Thomas SM, Fitzgerald JB, Pollock RE, Evans DB. Isolated splenic metastases from colon carcinoma. *Eur J Surg Oncol* 1993; 19:485-490.
4. Williams L, Kumar A, Aggarwal S. Calcified splenic metastasis from gastric carcinoma. *Abdom Imaging* 1995; 20:312-314.
5. Scintu F, Carta M, Frau G, Marongiu L, Pipia G, Casula G. Splenic metastases of pulmonary carcinoma. A proposae of a clinical case. *Minerva Chir.* 1991; 46: 1277-1280.
6. Carrington BM, Thomas NB, Johnson RJ. Intrasplenic metastases from carcinoma of the ovary. *Clin Radiol*, 1990; 41:418-420.
7. Catona A, Pavesi L, Gossenberg M, DaPrada GA, Mussini G, Pedrazzoli P. Splenic metastases of ovarian carcinoma. *Minerva Chir* 1993;30;48: 1031-1034.
8. Hamy A, Letessier E, Gaschignard N, Guillard Y, Paineau J, Visset J. Splenic metastases. A proposal of 4 cases. *J Chir Paris* 1993; 130:467-9.
9. Buzbee TM, Legha SS. Spontaneous rupture of spleen in a patient with splenic metastasis of melanoma. A case report. *Tumori* 1992;29;78: 47-48.
10. Marymount JH Jr, Gross S. Patterns of metastatic cancer in the spleen. *Am J Clin Pathol* 1963; 40: 58-60.