

TWO CASES WITH ATYPICAL METASTASIS IN COLORECTAL CANCER: SPLENIC AND RENAL METASTASIS

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Atypical metastasis, such as splenic and renal metastasis is rare in colorectal cancer. There have been case reports of colorectal cancer patients with isolated splenic metastasis, even after years of surgery in the literature. **Aim:** To report two colorectal cancer cases with atypical metastasis. **Results:** The first patient was a 58-year old man who had isolated splenic metastasis after 20 months of surgery. The other one was a 51-year old male patient with both lung and renal metastasis at rectal cancer diagnosis. Splenic and renal metastases have been histopathologically documented in both of them. The first patient was given chemotherapy after splenectomy. The other one had also multiple lung metastases besides renal metastasis. He received palliative chemotherapy.

Key Words: atypical metastasis, isolated splenic metastasis, renal metastasis.

Isolated splenic metastasis is rare in colorectal cancer. Malign melanoma, breast and ovarian cancers are the most common solid tumors in which splenic metastasis occurs [1]. Isolated splenic metastasis may be synchronous or metachronous. The rates of isolated splenic metastasis are reported as 4.4% for colon cancer and 1.6% for rectum cancer. It is generally diagnosed while evaluating asymptomatic cancer patients with increasing levels of carcinoembryonic antigen (CEA). In this report, our aim is to report two cases with atypical metastasis.

Case 1. A 58-year old male patient was admitted to the hospital with ileus a year ago. Hemicolectomy was performed after the diagnosis of colon carcinoma. Histopathology revealed colon adenocarcinoma without lymph node involvement (stage III). He was given adjuvant 5-fluorouracil (5-FU)-based chemotherapy. He had a CEA level elevation [4.62 ng/mL (N: 0–3.4)] in blood serum fifteen months after hemicolectomy without any evidence of local or distant metastasis on evaluation. However, a splenic mass was diagnosed 5 months later. Splenectomy was performed, and histopathology revealed the metastasis of colon adenocarcinoma in the spleen. A 3.5 x 3 x 2.5 cm size tumor was located just beneath the capsule of the spleen (Fig. 1, a, b). Chemotherapy which consisted of 5-FU, leucovorine (LV) and oxaliplatin (FOLFOX-4) was given. He had a second relapse in the splenic localization (5.5 x 3 cm) after 11 months of first relapse. An increased uptake of 18-fluorodeoxyglucose (18-FDG) was observed only in this lesion with standardized uptake value (SUVmax) of 11.7 on 18-FDG-positron emission computerized tomography (18-FDG-PET-CT) (Fig. 2). Palliative chemotherapy including 5-FU, LV, irinotecan (FOLFIRI) and

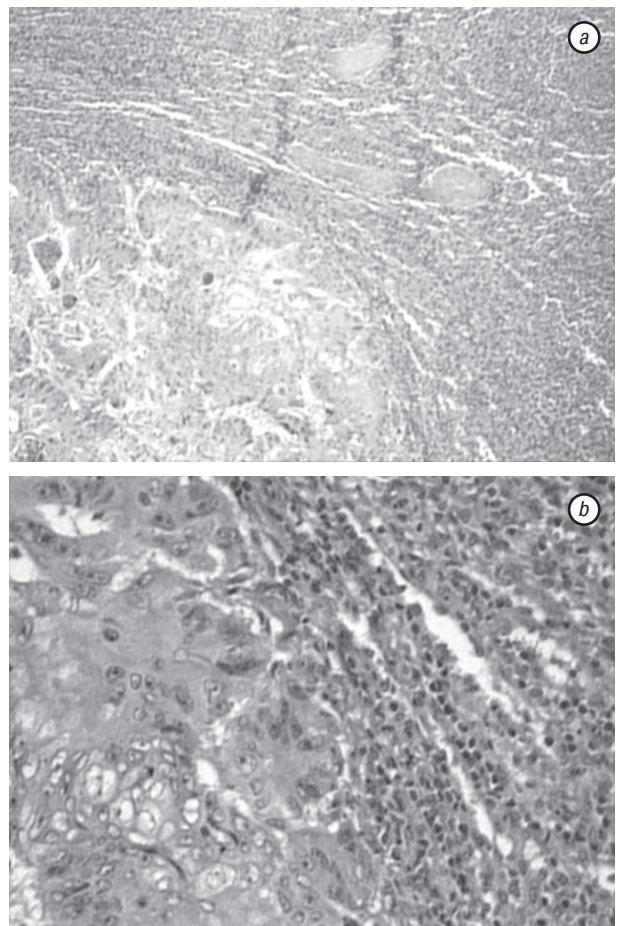


Fig. 1. Focal necrosis and atypical prismatic tumor cells with abortive organization, hematoxylin and eosin staining — 10X (a), 40X (b)

bevacizumab was started. The patient has no evidence of progression for 7 months after the second relapse.

Case 2. A 51-year old male patient was admitted with 2 months of constipation and hematochezia. He was diagnosed as having rectal adenocarcinoma with bilateral lung metastasis and a solitary nodular lesion (1.8 x 1.5 cm) in the upper pole of right kidney. Renal mass SUVmax was 13.1 on 18-FDG-PET-CT (Fig. 3). Renal aspiration biopsy was performed to determine

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Abbreviations used: 5-FU – 5-fluorouracil; 18-FDG – 18-fluorodeoxyglucose; CEA – carcinoembryonic antigen; CT – computerized tomography; PET-CT – positron emission computerized tomography.

whether solitary renal mass was a synchronous renal cell carcinoma or rectal adenocarcinoma metastasis to the kidney. Cytology of renal mass revealed colorectal adenocarcinoma metastasis (Fig. 4, *a, b*). He was given FOLFIRI plus bevacizumab. Though the CEA level decreased from 60.4 ng/mL to 3.93 ng/mL after 6 cycles of chemotherapy, lung and renal lesions remained stable on CT. Five months following the last cycle of chemotherapy, metastatic lesion at left sacroiliac joint and corpus of the second vertebrae were diagnosed when he presented with pain on his left hip radiating to left leg. He was given 2000 cGy of radiotherapy to those lesions which relieved his pain. Presently, he is at the ninth month of his follow-up.

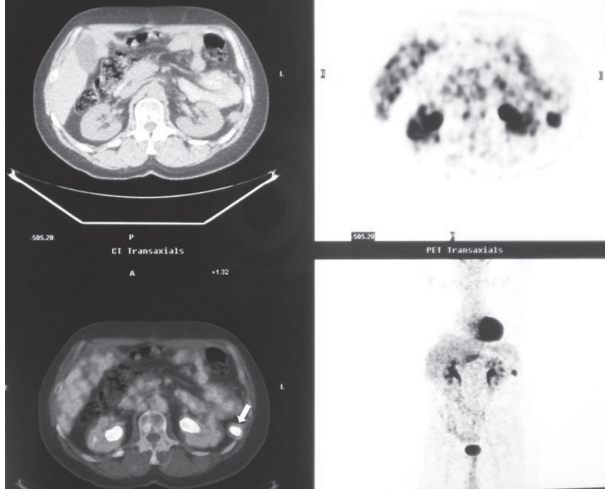


Fig. 2. Metastatic lesion in the splenic localization (arrow) on 18-FDG-PET-CT at second relapse (SUVmax = 11.7)

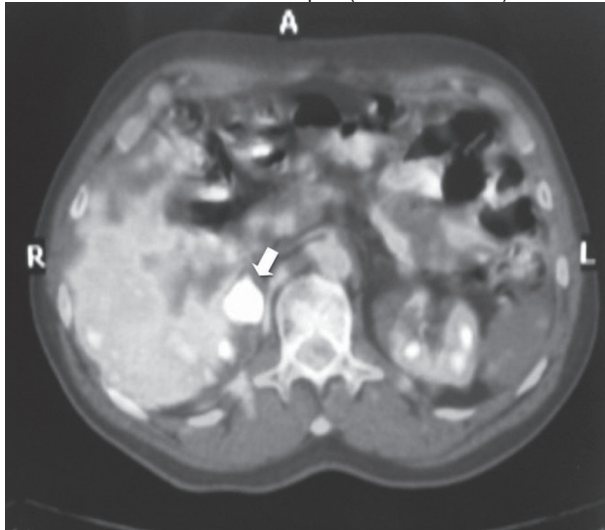


Fig. 3. A solitary nodular lesion with a dimension of 18 x 15 mm in the upper pole of right kidney on 18-FDG-PET-CT (SUVmax = 13.1)

Atypical metastasis of colon cancer may occur after many years from primary cancer diagnosis [2]. Splenic and renal metastases are very rare [2–4]. The rarity of splenic metastasis was attributed to anatomic characteristics like the sharp angle of the splenic artery with the celiac axis, rhythmic contractions by the sinusoids and immune surveillance of the reticuloendothelial system [5].

The splenic metastasis in our case was located just beneath the capsule. Afferent lymphatics are

present only in the capsular, subcapsular and trabecular regions of the spleen. It was postulated that this may explain the subcapsular location of splenic metastasis [6].

Splenectomy should be the treatment of choice for isolated splenic metastasis [5]. Though chemotherapy following splenectomy may be preferred, the evidence in the literature is inadequate to lead a definite conclusion related to its efficacy. Our patient was given FOLFIRI plus bevacizumab following splenectomy because of his relatively young age and good performance status. Follow-up in our case is not long enough to comment on the role of chemotherapy.

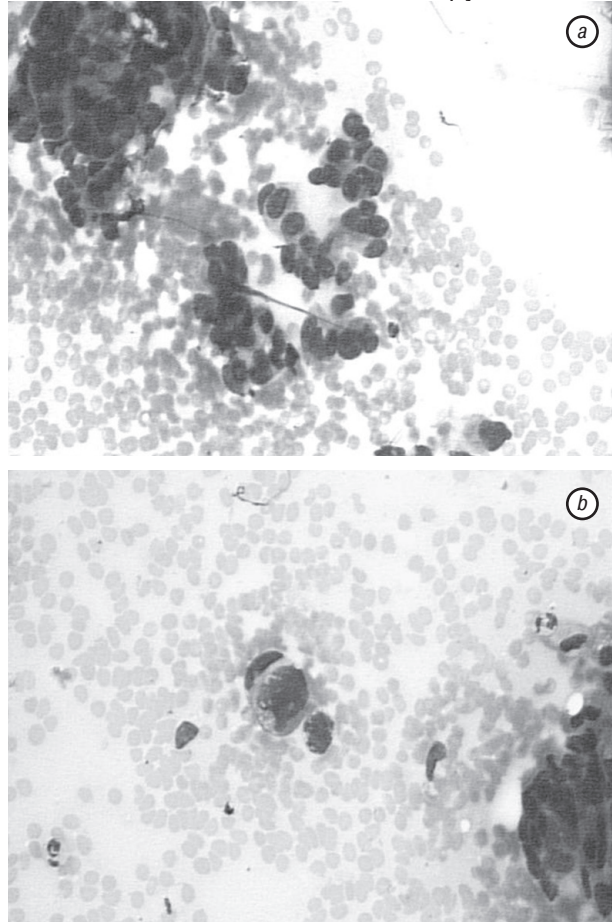


Fig. 4. Tumor infiltration including discohesive cells. Tumor cells had large, hyperchromatic and moderately differentiated pleomorphic nuclei with cyanophilic cytoplasm (May-Grünwald Giemsa staining, 400X)

Solitary nodular renal lesions are generally thought to be primary renal carcinoma. Multiple lung metastases in addition to a solitary renal mass and multiple lung metastases as in our case necessitate a renal biopsy to differentiate these two primaries. Though the prognosis in both situations is dismal, the treatments of these primaries are specific which rationalizes the renal biopsy procedure.

Positive PET scans in both cases suggest a contributory role of it in distinguishing metastasis from benign lesions.

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