Metastatic Breast Cancer Imitating Acute Diverticulitis

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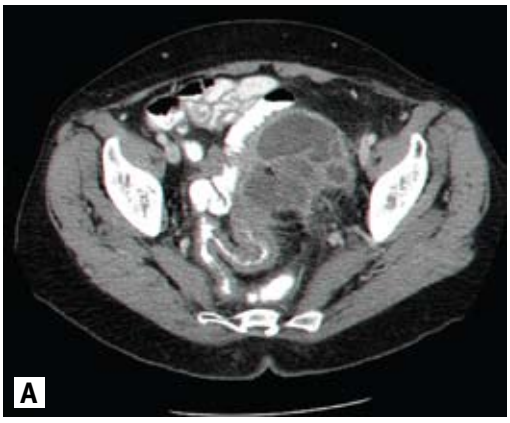
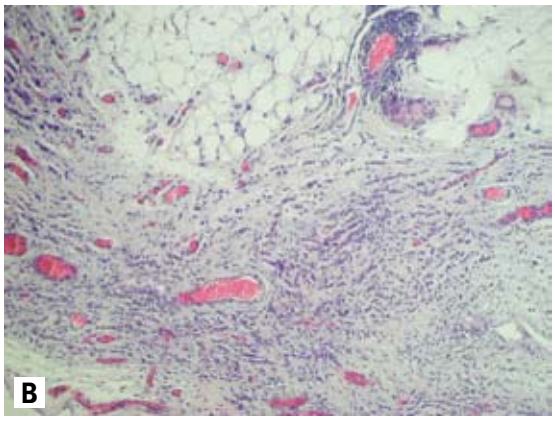
Carcinoma of the breast has the potential for widespread dissemination but metastases to the gastrointestinal tract are infrequent. Although rare, metastatic spread to the intestinal tract occurs mainly in infiltrating lobular carcinoma [1] and present late in the course of the disease, usually after an average of 9.5 years but sometimes as long as 20 years after the initial diagnosis [2]. This long interval usually results in delayed diagnosis. We present a patient with metastatic infiltrating lobular carcinoma in the sigmoid colon 16 years after being treated for an infiltrating lobular carcinoma of the breast. The presenting clinical picture was of acute diverticulitis, and the correct diagnosis was made only at the operation.

PATIENT DESCRIPTION

A 63 year old woman underwent a lumpectomy and axillary dissection at the age of 49 due to infiltrating lobular carcinoma of the left breast (Stage T-2, N-0). She was subsequently treated with radiation but not chemotherapy, and then followed yearly with no signs of recurrence. She was admitted urgently to the department of surgery due to left lower-quadrant abdominal pain. On examination she had focal tenderness in the left lower quadrant. An abdominal computed tomography scan showed an inflammatory process involving the sigmoid colon with a peri-colonic abscess consistent with sigmoid diverticulitis [Figure A]. She was treated with broad-spectrum antibiotics and the abscess was drained percutaneously. Her condition improved and she was discharged form the hospital with oral antibiotics.

A follow-up CT scan 3 weeks later showed significant regression of the inflammatory process. Despite the radiological improvement the patient remained symptomatic with abdominal discomfort and constipation. A colonoscopy demonstrated a narrowing of the lumen that did not allow passage of the instrument but did not show any pathology in the mucosa. She was then referred for a virtual colonoscopy that also showed a narrowing of the sigmoid colon. Because of the ongoing abdominal symptoms and inability to rule out a tumor, surgical resection was contemplated. At surgery an inflammatory mass involving the sigmoid colon and the left adnexa was revealed. A sigmoidectomy and left salpingo-oophorectomy were performed. The postoperative course was uneventful. The histopathology examination of the specimen showed numerous diverticular outpouchings of the mucosa which were particularly prominent in the area of stenosis of the bowel lumen. The colon itself had a benign mucosa. Within the adipose tissue there were four small benign lymph nodes. In the same area of the serosal surface of the colon and within the fibroadipose connective tissue, deposits of foreign tissue were observed. Microscopic examination disclosed metastases of infiltrating lobular breast carcinoma [Figure B]. The tumor cells





[A] CT scan showing the inflammatory process involving the sigmoid colon and the abscess that was later drained percutaneously under CT guidance

[B] Cellular infiltrate just beneath the peritoneal surface showing "single file" pattern of uniform small tumor cells typical of lobular carcinoma of the breast

were Ca 15-3 positive, strongly positive to estrogen but negative to progesterone. Sixty percent of the tumor cells stained weakly for HER-2/neu. Following this finding the patient had a metastatic work-up that was negative. She is currently being treated with hormonal therapy.

COMMENT

Gastrointestinal metastases from breast carcinoma are very rare, occurring in only 0.8% of cases [3], usually from infiltrating lobular carcinoma. The clinical presentation can mimic Crohn's disease [4], colon cancer [3] and even diverticulitis [5].

In the present report we describe a patient with the clinical symptoms and findings consistent with complicated diverticulitis, 16 years after she was operated for an infiltrating lobular carcinoma. A CT scan and a colonoscopy were not diagnostic of the metastatic disease since the metastases were only seen in the serosa and fibroadipose connective tissue surrounding the colon. The growth pattern was the same as seen in infiltrating lobular carcinoma. The long interval between the first presentation of the breast cancer and the metastatic disease was also misleading.

In conclusion, metastatic lobular breast cancer can occur in the gastrointestinal tract even after long periods. A high index of suspicion is needed because the diagnosis can be difficult and sometimes it is impossible to differentiate it from other gastrointestinal pathologies including inflammatory processes and primary colon cancer. Since hormonal and chemotherapy treatment are readily available and highly effective for the treatment of this type of cancer, prompt diagnosis is of utmost importance. Immunohistochemical markers can help in differentiating it from other malignant tumors and in planning the adjuvant therapy.

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