Metastatic Breast Cancer Imitating Acute Diverticulitis

Ilana Haas Hamish MD¹, Haim Paran MD¹, David Cohen MD² and Mordechai Gutman MD¹

¹Department of Surgery B, Sheba Medical Center, Tel Hashomer, affiliated with Sackler Faculty of Medicine, Tel Aviv University, Ramat Aviv, Israel
²Department of Surgical Pathology, Herzliya Medical Center, Herzliya, Israel

KEY WORDS: metastatic breast cancer, gastrointestinal tract, infiltrating lobular carcinoma, diverticulitis

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 from 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...
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 workup 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.

Corresponding author:
Dr. M. Gutman
Dept. of Surgery B, Sheba Medical Center, Tel Hashomer 52621, Israel
Phone: (972-3) 530-8167, Fax: (972-3) 530-8157
email: Motti.Gutman@sheba.health.gov.il

References

Capsule
The Hh signaling pathway may be a possible therapeutic target for brain tumor

Brain cancer is the most common solid tumor in children. For children with medulloblastoma, survival rates have steadily improved as a result of optimized therapies. In contrast, children with an aggressive brainstem tumor called DIPG (diffuse intrinsic pontine glioma) are far less fortunate, with death occurring usually within a year. Because biopsy specimens of human DIPG are rare and because there are no relevant animal models, little is known about the cellular and molecular origins of these tumors. A study by Monje et al. provides insight into both the likely cell of origin of DIPG and a signaling pathway that may help promote tumor growth. The culprit cell appears to be a previously uncharacterized neural precursor cell in the normal human brainstem. The density of these cells peaks during the time of childhood, when DIPGs most commonly arise. In a cell culture model, human DIPG cells showed activation of the Hedgehog (Hh) signaling pathway, which is critical to normal brain development and which is aberrantly activated in other human cancers, including medulloblastoma. Thus, DIPG probably arises through dysregulation of postnatal neurodevelopment, and the Hh signaling pathway may be a possible therapeutic target for this tumor.

Proc Natl Acad Sci USA 2011; 108: 4453
Eitan Israeli

“Kind words can be short and easy to speak, but their echoes are truly endless”
Mother Theresa (1919-1947), Albanian-born Catholic nun who founded the Missionaries of Charity in Calcutta. Her humanitarian work with the poor, the sick and the dying extended to 610 missions in 123 countries. She won the Nobel Peace Prize in 1979 and after her death was beatified by Pope John Paul II. Her legacy is not without controversy and she has been criticized for her strong stance against abortion and contraception and belief in the spiritual goodness of poverty.

“Peace is not an absence of war, it is a virtue, a state of mind, a disposition for benevolence, confidence, justice”
Baruch Spinoza (1632-1677), Dutch Jewish philosopher today considered one of Western philosophy’s most important thinkers. Although well versed in Jewish texts, he developed highly controversial ideas regarding the authenticity of the Hebrew Bible and the nature of the Divine, which it is believed led Jewish community leaders to excommunicate him.