

An unusual subcutaneous breast cancer metastasis in a 86-year-old woman

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Abstract. – The most common metastasis site of breast cancer are the local and distant lymph nodes, bone, lungs, liver and brain. We report a 86-year-old woman with an unusual abdominal subcutaneous metastasis of breast cancer. The patient was diagnosed with invasive lobular breast cancer and had been treated six months earlier with modified radical mastectomy. Later she presented a painless mass on the middle upper abdominal wall. She was subsequently admitted to the hospital to perform a whole body CT scan, confirming the presence of the abdominal mass in epigastric region, causing a partial compression of the stomach. Histopathological studies confirmed that the abdominal mass was a rare subcutaneous metastatic lesion of breast origin. The patient underwent a surgical intervention to remove the metastasis and she recovered fully.

Key Words:

Invasive lobular carcinoma of the breast, Metastatic lobular carcinoma of the breast, Subcutaneous metastasis from breast cancer.

Introduction

Breast cancer is the most common malignancy among women and it is responsible for 26% of all newly diagnosed cancers in females and for 15% of the cancer-related deaths in women^{1,2}. There are different types of breast cancer and they originate in different parts of the breast. The classification of the malignant primary tumor³ includes the carcinoma in situ (ductal carcinoma in situ, lobular carcinoma in situ and Paget disease) and the invasive carcinoma, represented by the invasive ductal carcinoma not otherwise specified (75%), the invasive lobular carcinoma (10%), the medullary carcinoma (5%) and other forms less

common. The two main types are ductal carcinoma and lobular carcinoma. Ductal carcinoma is the most common type of breast cancer and it starts in cells which line the milk ducts, while the lobular carcinoma begins in the glands which make milk⁴. The invasive lobular carcinoma represents the second common type of breast carcinoma, accounting for approximately 10%-15% of all invasive breast cancers⁵ and it is more likely to be found in both breasts compared to other forms of breast cancer. The incidence of invasive lobular carcinoma has been increasing while the incidence of invasive ductal carcinoma has not changed in the last two decades. Moreover, patients with invasive lobular carcinoma are older than those with non-lobular invasive carcinoma (mean age 57 versus 64 years)⁶. Notwithstanding the early diagnosis and the application of innovative therapies, approximately 50% of patients are still at risk of developing distant metastasis^{7,8}. The most common metastasis site of breast cancer are the local and distant lymph nodes, bone, lungs, liver and brain⁹. We decided to bring to your attention an unusual case of subcutaneous abdominal metastasis from invasive breast lobular carcinoma, which first presented clinically as a mass in epigastric region, with no other clinical evidence of recurrence and metastasis.

Presentation of Case

We present the case of a 86-year-old woman who was referred to our Institution with an abdominal mass that on further evaluation was diagnosed as metastatic invasive lobular carcinoma of the breast. She had been treated six months earlier, in another hospital, with modified radical mastectomy due to the left breast invasive lobular carcinoma without any axillary lymphectomy. She had a stage III pathological T3N0M0 (ER positive at 90%, PR positive at 50%, HER-2/neu

1+ negative) and she is currently being treated with anti-estrogen therapy. At the time of diagnosis of breast cancer, the patient reported to be under treatment with oral corticosteroids for 1 year, to treat a severe form of asthma. Taking into account that the role played by steroids in breast tumors, remains still unclear^{10,11}, we suggested her to use inhalatory steroids instead of the oral administration. In fact, it is well known as the inhalatory steroids are not able to modify the concentrations of the endogenous corticosteroids, androgens and of their metabolites with respect to steroids orally administered¹². At the physical examination, performed at her semi-annual medical check-up, she presented a suspicious mass in the middle upper of abdomen (Figure 1 A). After further questioning she revealed that approximately 3 months after the surgical intervention of mastectomy, she had felt an abdominal mass, but had never brought it to anyone's attention. She denied fever, rigors, diarrhea or abdominal pain and she was anicteric. Her chest was clear to auscultation bilaterally and she had a regular rate and rhythm, without murmurs, rubs, or gallops. There were no palpable abdominal masses (except for the one here discussed) and no Courvoisier's or Murphy's signs. There was no ascites or hepatosplenomegaly and no evidence of peripheral edema. The ultrasound demonstrated the bilateral absence of axillary lymphadenopathy. She was awake, alert, and oriented. She was subsequently referred to the Policlinico Umberto I (Rome, Italy) for further evaluation. She underwent an abdominal CT scan, performed with in-

travenous contrast, which demonstrated an extrinsic compression along the greater curvature of the stomach, due to a 6 cm hypodense regular mass in the epigastric region (Figure 1 B), crossing the abdominal wall. An ultrasound guided biopsy of the abdominal mass was performed and revealed a metastatic invasive lobular carcinoma consistent with a breast primary.

Treatment

The patient was taken for surgery. A small median incision was made on the epigastric region over the metastasis. Gentle dissection was then performed around the subcutaneous fat surrounding the metastasis. A large mass measuring about 10 cm × 10 cm was found infiltrating the linea alba causing a separation of the left and right rectus abdominis muscles and a significant compression of the stomach. However, there was no involvement of the stomach or liver (Figure 2). Complete excision was performed. The patient recovered uneventfully and was discharged on the 3rd postoperative day. At one-year follow-up, no recurrence was noted.

Outcome

In summary this 86-year-old woman had a stage III pathological T3N0M0 left breast invasive lobular carcinoma (ER positive at 90%, PR 50%, HER-2/neu 1+ negative). She is currently undergoing her 18-month of treatment with anti-estrogen therapy and is tolerating it well. Our plan at this point is to continue on her current treatment protocol and then restage her with a

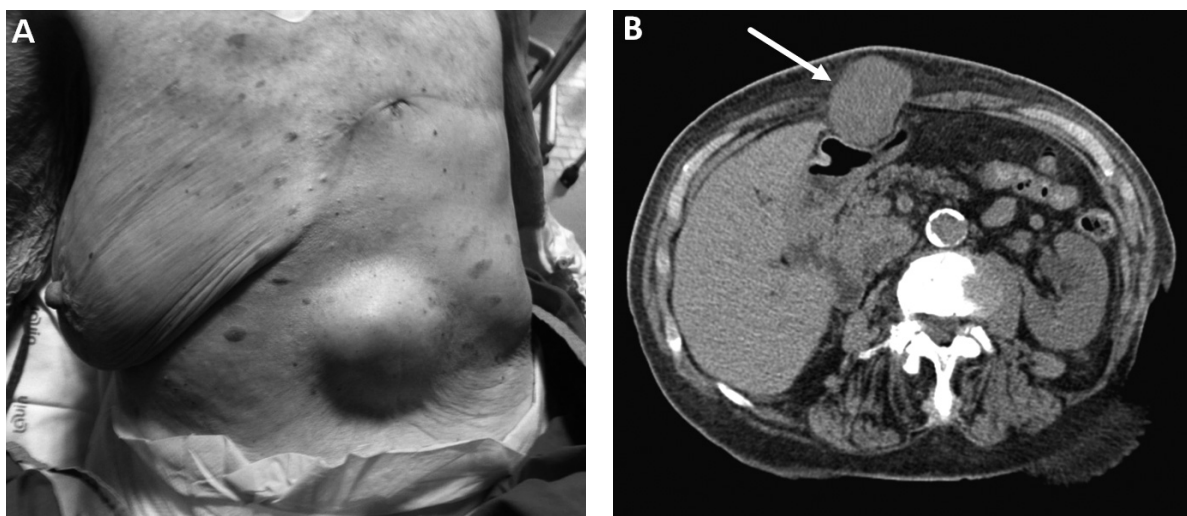


Figure 1. *A*, Picture demonstrating the clinical presentation of the metastasis. *B*, Abdominal CT scan showing a 6 × 5 cm mass in the subcutaneous layer of middle upper abdomen, causing an extrinsic compression of the stomach.



Figure 2. Intraoperative picture of the subcutaneous metastasis partially removed. No involvement of the stomach or liver was found.

CT scan of the chest, abdomen and pelvis, and bone scan. The biopsy obtained from the subcutaneous tissue of the abdomen showed metastatic lobular carcinoma of the breast, in fact immunohistochemistry revealed tumor cells staining positive for ER (90%) and for PR (50%). Invasive ductal carcinoma of the breast has a tendency to metastasize more commonly to the liver, lung, and brain compared to lobular carcinoma that tends to spread to bones, gynecological organs, peritoneum, retroperitoneum and the gastrointestinal tract¹³, while the subcutaneous metastasis has not yet been described. The diagnosis of metastatic lesions of breast cancer, becomes even more unlikely on the rare occasion when it represents as unusual presentation. An interesting aspect of our case is the involvement of the subcutaneous layer of the abdomen, here described for the first time. The patient had only this abdominal mass, without any other clinical symptom, so she delayed her seek medical attention, without taking into account any relation with the previous breast lesion. The histological diagnosis of the metastatic lesions can be difficult, but the immunohistochemistry analysis can help us to obtain the most accurate diagnosis. In fact, some markers as gross cystic disease fluid protein-15 (GCDFP-15), estrogen (ER) and progesterone (PR) receptors allow to confirm the diagnosis. The GCDFP-15 and the ER and/or PR are positive in metastatic lesions of the breast, in contrast to most others carcinomas, which are usually

negative. In conclusion, our patient only had surgical treatment for the metastasis and at the time of writing this case report (one year after surgical removal of abdominal metastases), the patient has no metastatic disease or tumor recurrence.

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