

Case Report

A rapidly progressive giant tumor with one year growth on breast: a rare size breast mass

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Abstract: Primary rapidly progressive malignant tumor on breast is a very rare disease. We report a 62-year-old postmenopausal patient with history of one year breast lump and progressive increase in a period of two months. The giant breast tumor with a rare size about 7.5 × 7.0 cm, the skin of the breast to become resembling orange peel and metastasis to multiple organs. The histological sections of core needle biopsy confirmed the diagnosis of invasive adenocarcinoma. Hence, reduction surgery for local skin in the treatment of breast cancer increased the effectiveness of the docetaxel epirubicin (TE: docetaxel 75 mg/m², day 1; epirubicin 75 mg/m², day 1) chemotherapy by improving the patient's general condition, and not continue to increase was observed during follow-up.

Keywords: Breast cancer, giant tumor, pathology, tumor growth

Case report

A 62-year-old postmenopausal and otherwise healthy patient was hospitalized in June 2014, with complaints of pain in the outer quadrant of the right breast one year. She reported a breast lump and progressive increase in her breast size over the previous in the right side one year. The lump initially appeared as a small and asymptomatic swelling. The patient has a child with breast-feeding and nothing particularly noteworthy in the personal medical and family histories. The family history was negative for breast cancer and the patient did not smoke or consume alcohol. The breast lump, involving the whole right breast at the time of presentation grew progressively in a period of 2 months. The lump was immobile during physical examination revealed a lump below the nipples of the right breast, with severe asymmetry based on marked enlargement of the right side. The giant breast lump was an about 7.5 × 7.0 cm, single, irregular borders, somewhat hard, poor mobility and tenderness. The skin of right breast was red with orange peel, and the lump was tough and mobile. However, there was no skin erosion, ecchymosis, nipple discharge, nipple retraction, resembling orange peel or dimpling

identified (**Figure 1**). Some lymphadenopathy was detected on the right axillaries. The pre-operative abdominal and thoracic tomography showed the diameter of the lump was about 7.2 cm and the CT value arranged 21 HU, no distant metastasis (**Figure 2**). Though there was no positive finding in the laboratory examinations, the lump and contralateral breast tissue was further evaluated with a combined computed positron emission tomography (PET) and computer tomography (CT) examination by an integrated (18)F-FDG PET/CT system (**Figure 3**). (18)F-FDG PET/CT diagnosed breast cancer, and widespread metastasis with fat on clearance around the lump, beside the sternal lymph node, right chest wall, and right axillary lymph node. Lungs, bone, brain, liver, kidney and spleen were not observed metastasis. The histological sections of core needle biopsy confirmed the diagnosis of invasive adenocarcinoma (**Figure 4**). Immunohistochemical analysis demonstrated that the tumor cells were moderately positive for Ki-67(+), PR (+), E-ca (+), CK7 (+); the others immunohistochemical, such as ER, p63, CK14, CK5/6 were all negative. Based on the physical and radiological findings, it is clear that this is a case of cancer with metastasis to multiple organs, and reduction surgery for



Figure 1. Right side of breast was bigger and red than left side, and the right lump was tough and mobile with no skin erosion, ecchymosis, nipple discharge, nipple retraction, resembling orange peel or dimpling identified.

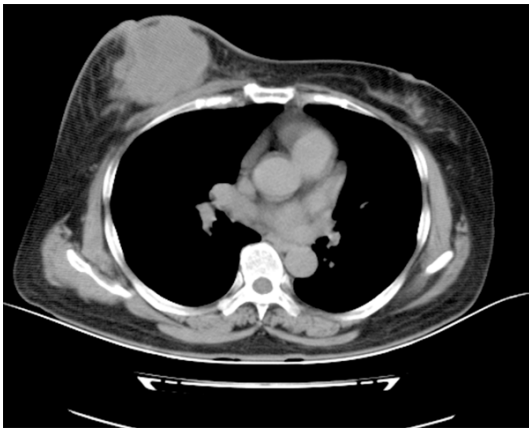


Figure 2. The horizontal plane of 16-slice computed tomographic scan revealed a large dense lesion with microcalcifications on right chest wall.

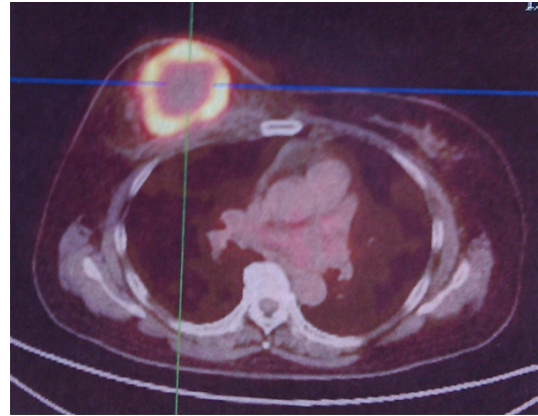


Figure 3. (18)F-FDG PET/CT diagnosed breast cancer, and the imaging revealed a giant breast lump on right chest wall.

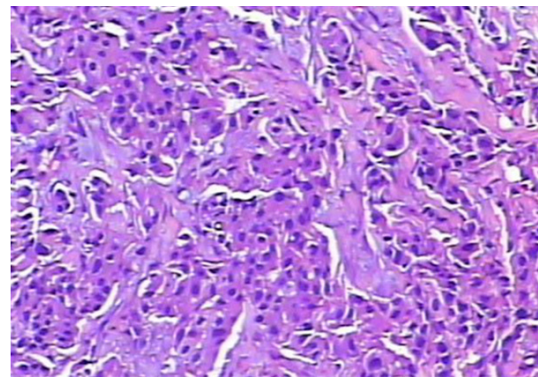


Figure 4. Image of core needle biopsy histologic diagnosis using hematoxylin and eosin staining (original $\times 100$).

local skin in the treatment of breast cancer increased the effectiveness of the docetaxel epirubicin (TE: docetaxel 75 mg/m², day 1; epirubicin 75 mg/m², day 1) chemotherapy by improving the patient's general condition. And the tumor decreased significantly under closely followed-up after chemotherapy.

Discussion

In the breast, a diagnostic work-up is needed due to its varying history and clinical course, given the fact that they tend to be small in diameter. However, patients seek medical attention over their concerns with the size augmentation, disfigurement or asymmetry, not to mention the fear of malignancy, of a swelling mass [1]. With the development of medicine and the progress of the society, most patients when they found the breast lump will choose

medical and surgical treatment as soon as possible. This patient only with history of one year breast lump and progressive increase in a period of two months, is a rare giant size breast lump. Giant breast tumors are rapidly growing breast masses with diameters exceeding 5 cm and/or weights of more than 500 g, they can rarely grow to immense proportions, resulting in congestion and ulceration of skin by centrifugal pressure [2].

Giant breast tumors were reported benign breast tumor of fibroadenomas in the most literatures [1-4]. Malignancy may be suspected because of old age, rapid growth and skin ulceration. So this case posed a diagnostic challenge initially since the breast swelling was of short duration of one year and there was no previous history of breast asymmetry in this patient. Fortunately, its the fact that the tumor

grew rather rapidly two months to presentation leading to the skin of right breast was red with orange peel, this gives rise to a suspicion of malignancy. And yet, the malignancy tumor can be extremely difficult to differentiate from a fibroadenoma, which is sometimes treated with a non-operative approach [5].

For this reason, early diagnosis of the malignancy tumor is crucial so that the correct management of the tumor, which often does include surgery, can be pursued as early as possible. (18)F-FDG PET/CT might help to detect residual tumor, core tissue biopsy is an attractive alternative to fine needle aspiration, which represented the preferred means of pre-operative diagnosis for giant breast tumors, and the histologic information gained from this procedure is important in guiding surgical treatment and chemotherapy [6].

Giant malignancy breast tumors continue to pose a challenge in management. These tumors which outgrew and projected out of the skin cover are poorly understood because of their rarity and unpredictable behavior. The majority of their bloods supply the giant tumors in this patient from skin collaterals. Their rapid growth, associated with skin congestion and ulceration, and tendency to recur. In order to reducing the likelihood of tumor recurrence, mastectomies were considered the appropriate surgical procedure. Because of the large size of the tumors when compared to the overall amount of breast tissue, the surgeon must expect the majority of blood loss during resection to come from the creation of the skin flaps. And some have recommended the consideration of prior-operative chemotherapy for these cases of chest wall infiltration. In this situation, reduction surgery for local skin in the treatment of breast cancer increased the effectiveness of the docetaxel epirubicin (TE: docetaxel 75 mg/m², day 1; epirubicin 75 mg/m², day 1) chemotherapy by improving the patient's general condition. And the tumor decreased significantly under closely followed-up after four cycles of TE-based chemotherapy in this patient. Then, she would be taken simple mastectomy because of the risk of local recurrence after more conservative procedures.

Disclosure of conflict of interest

None.

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