



## Small Lymphocytic Lymphoma Presenting as Breast Mass: A Rare Case Report

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**Abstract:** Primary breast lymphoma is rare and it accounts for around 0.5% of malignant breast neoplasms. Small lymphocytic lymphoma (SLL) is a subtype of non-Hodgkin lymphoma originating from a B-cell lineage. This report presents a case of primary SLL of the breast with lung metastasis that had excellent clinical response. We reported a 67-year-old female complained a right breast mass that suddenly appeared after she got massage on her right left arm. The mass was swollen and painless with no systemic complications. The specimen was submitted to histopathology department and it revealed small diffuse lymphocytic lymphoma. Chest X-ray showed a lung metastasis. The patient was then treated with CHOP regimens (Cyclophosphamid, Doxorubicin, Vincristin, and Prednison) and the clinical result was excellent. The side effects of the medication were minimal. In conclusion, primary breast lymphocytic lymphoma is rare and this case highlights the differential diagnosis for a painless breast mass. The treatment must be individualized and multimodal, with chemotherapy being the most accepted treatment.

**Keywords:** breast lymphoma; breast mass; malignancy

## INTRODUCTION

Primary breast lymphoma is rare and it accounts for around 0.5% of malignant breast neoplasms. It is caused due to the paucity of lymphoid tissue in the breast. Small lymphocytic lymphoma (SLL) is a subtype of non-Hodgkin lymphoma originating from a B-cell lineage. The most frequent types of B lymphomas are follicular lymphoma and diffuse large B-cell lymphoma.<sup>1-2</sup> This report presented a case of primary small lymphocytic lymphoma of the breast with lung metastasis that had excellent clinical response.

## CASE REPORT

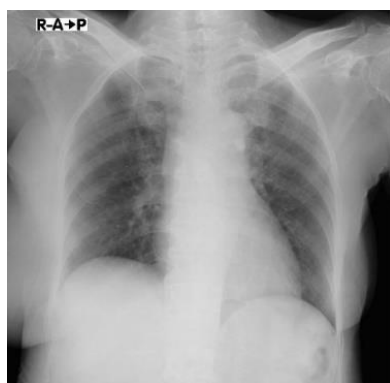
A 67-year-old female complained a right breast mass that suddenly appeared after she got massage on her right left arm (Figure 1). The mass was swollen and painless with no systemic complications. She did not have any lump at her body before. Tiredness, dizziness, weight loss and familial cancer were denied. History of first menstruation was 14 years old. Breastfeeding and hormonal contraception were admitted. After two cycles of Docetaxel and Doxorubicin, she looked weak and assessed with Karnofsky Score 40%. The right breast was presented with mass, skin discoloration and retracted nipple. The mass was solid, tender, sized 10x8cm, well defined, mobile, and no nipple discharge. There were no palpable ipsilateral or contralateral axillary lymphadenopathy.

Laboratory result showed WBC of 7600/mL hemoglobin of 12,6g/dl and platelet count of 304,000/ $\mu$ L. Chest X-ray revealed lung metastasis (Figure 2). The specimen was submitted to histopathology department and it showed small diffuse lymphocytic lymphoma (Figure 3).

The patient was then treated with CHOP regimens (Cyclophosphamid, Doxorubicin, Vincristin, and Prednison). After the first cycle, the breast mass was no longer palpable and felt swollen. She then passed the next cycle chemotherapy and the mass started to grow.



**Figure 1.** Right breast mass



**Figure 2.** Chest X-ray revealed lung metastasis



**Figure 3.** Arrowhead indicates atypical lymphocytes

## DISCUSSION

Breast lymphoma is a rare entity representing about 0.5% of malignant breast neoplasms, less than 1% of non-Hodgkin's lymphomas and about 1.7% of all extra-nodal lymphomas.<sup>3</sup> Regarding the histological type, diffuse large B-cell lymphoma is the predominant variant, although up to 44% of patients may have MALT lymphomas. Other less common variants are: Burkitt's lymphoma, marginal zone lymphoma, small-cell lymphocytic lymphoma and large-cell anaplastic lymphoma.<sup>4,5</sup> Small lymphocytic lymphoma (SLL) is a mature (peripheral) B cell neoplasm characterized by a progressive accumulation of functionally incompetent lymphocytes, which are monoclonal in origin. SLL is a neoplasm of monomorphic, small round B-lymphocytes, involving the peripheral blood, bone marrow, and lymph nodes.<sup>6</sup>

The average age of diagnosis varies between 60 and 65 years and occurs almost exclusively in females, with few cases of primary breast lymphoma reported in men. Bilateral involvement is described in about 11% of cases. The clinical presentation and the imaging characteristics are no different from breast carcinoma.<sup>3</sup>

Imaging findings are nonspecific. Using mammography, most lesions correspond to hyperdense (91%) and oval (71%) masses, whereas in ultrasound, they appear as single (75%), circumscribed (50%), microlobulated (38%) and oval (50%) lesions. Generally, they are hypoechoic (87%); calcifications or spiculated margins are not frequent.<sup>7</sup> The diagnostic approach follows the same principles as any other breast lump with histological confirmation of the nodule and eventual suspicious adenopathies.<sup>5</sup>

This is a rare case of primary breast lymphoma which clinical presentation shows a swollen mass in unilateral breast and painless with a histological finding of a small lymphocytic lymphoma. There was no previous history of lymphoma. The patient has not had a mammogram. Regarding management, surgery, radiotherapy, chemotherapy and immunotherapy have been used alone or in combination; however, there is still no consensus on the best approach.

Chemotherapy, alone or combined, is the standard treatment.<sup>3,8</sup> This patient has been treated with CHOP regimens (Cyclophosphamid, Doxorubicin, Vincristin, and Prednison) and given an excellent local response. Unlike breast carcinoma whose approach is well established and often undergoes surgical management, there are no well-defined therapeutic guidelines due to the rarity of primary breast lymphoma, then we choose chemotherapy regimens for Lymphoma maligna. The treatment must be individualized and multimodal, with surgery reserved for patients who benefited from a better local control.<sup>3,9,10</sup>

Initially, primary breast lymphoma is considered to have a poor prognosis. It is thought to be similar to other lymphomas of the same histological type.<sup>3</sup> For this patient has a lung metastasis.

## CONCLUSION

Primary breast lymphocytic lymphoma is rare and this case highlights the differential diagnosis for a painless breast mass. The treatment must be individualized and multimodal. In this case, the patients responded well with the CHOP regimens.

## Conflict of Interest

No conflict of interest in this study.

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