

# Primary Non Hodgkin Lymphoma of the Breast

S Kumar, S Tiwary, R Khanna, A Khanna

## Citation

S Kumar, S Tiwary, R Khanna, A Khanna. *Primary Non Hodgkin Lymphoma of the Breast*. The Internet Journal of Surgery. 2006 Volume 9 Number 2.

## Abstract

Primary tumors of the breast arise mainly from the ductal system. However, tumors arising from the connective tissue had also been seen in clinical practice. Primary lymphoma of the breast is a rare diagnosis with an incidence of only 0.5%. We report a case of primary Non Hodgkin Lymphoma of the breast initially misdiagnosed as case of round cell sarcoma on FNAC.

## INTRODUCTION

Primary lymphomas of the breast are uncommon with incidence only 0.12 – 0.5 %. But they are potentially curable neoplasms. The pathogenesis of breast lymphomas is still unknown. The clinical stage, histological type of lymphoma, and patient's age seem to be important for the prognosis of primary lymphoma of the breast. Diagnosis in most of the cases is revealed by routine FNAC performed for breast lumps, but some times it is inconclusive or false reporting as our case was misdiagnosed as round cell sarcoma.

## CASE REPORT

A 37 years woman presented with a 3X3 cm lump in the upper and outer quadrant of the left breast since 4 months (figure 1).

### Figure 1

Figure 1: Clinical photograph showing retraction of the nipple

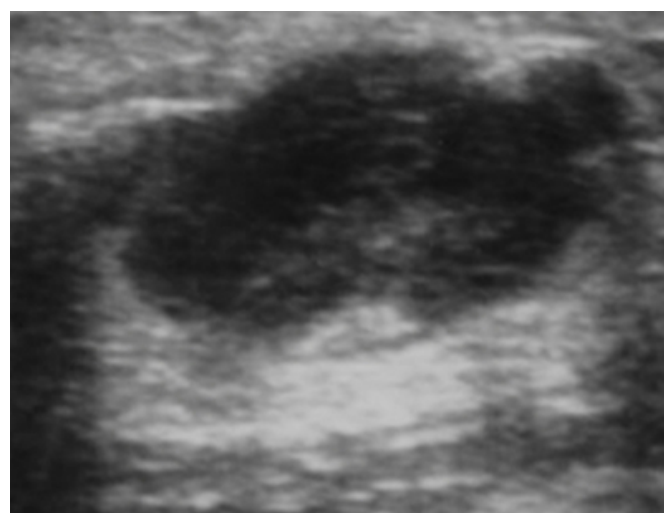


There was no history of nipple discharge, fever, bone pain or

respiratory discomfort. The clinical examination revealed hard, well defined and mobile lump with normal skin and nipple retraction. Ipsilateral axilla had 1 x 1 cm single, firm and mobile lymph node of apical group. Opposite axilla was normal. There was no other significant lymphadenopathy. Per abdominal examination was normal. FNAC of the lump diagnosed it as round cell sarcoma. Metastatic workup revealed no metastasis. Ultrasonography of the breast showed heterogenic hypoechoic lesion with irregular surface (figure 2).

### Figure 2

Figure 2: Ultrasonography breast showing hypoechoic lesions with irregular borders



The patient underwent modified radical mastectomy according to FNAC report. Mastectomy specimen showed 3 x 4 cm tumor with cut surface pale pink and fleshy appearance. (figure 3).

**Figure 3**

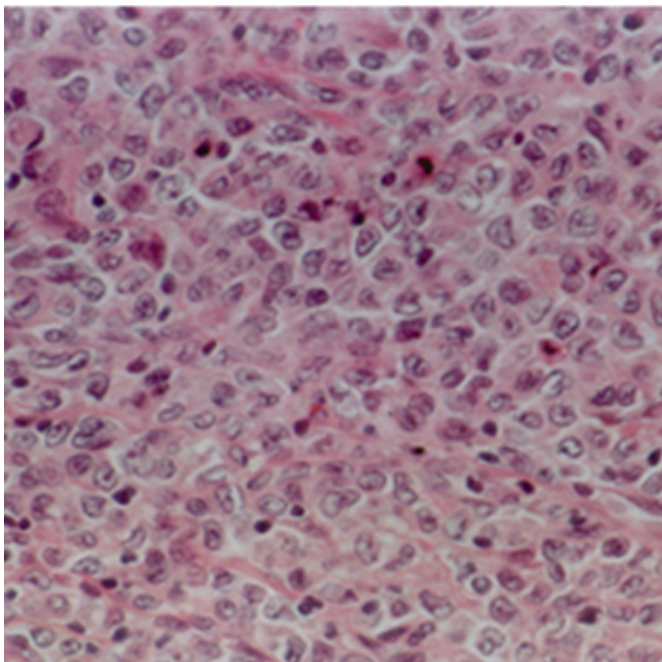
Figure 3: Cut surface of tumor showing pink pale fleshy appearance



Histopathology examination showed non Hodgkin lymphoma of the breast along with 6 out of 11 lymph nodes showing metastatic deposits (figure 4). Immunohistochemistry was positive for CD 19. The patient was offered post operative chemotherapy in form of CHOP regimen. Presently the patient is under chemotherapy follow up.

**Figure 4**

Figure 4: Microphotograph showing Non Hodgkin Lymphoma



## DISCUSSION

Breast lymphoma, either a manifestation of primary

extranodal disease or secondary involvement by systemic disease, is a rare malignancy. Primary breast lymphoma (PBL) has a reported incidence ranging from 0.12% to 0.53% of all breast malignancies. Secondary breast lymphoma had reported incidence of 0.07%. It comprises 17% of all malignancies metastatic to the breast. Primary non Hodgkin lymphoma of the breast should fulfill following criteria<sup>4</sup> (a) adequate pathological evaluation (b) both mammary and lymphomatous infiltrate in close association and (c) exclusion of either systemic lymphoma or previous extramammary lymphoma. It is very difficult to explain whether primary disease was in breast or in axillary lymph nodes as in our case. However ipsilateral presence has been acceptable<sup>4</sup>.

The clinical presentation and radiological features of breast lymphoma and carcinoma are similar. Both presents as painless enlarging breast lump. On mammogram, lymphomas may lack the irregular borders of infiltrating carcinoma and more than half exhibit no calcification. However, there is considerable overlap in these features, and pathology remains gold standard to differentiate these two malignancies. Despite the clinical and radiographic similarities, the treatment options differ. For this reason, it is important to correctly differentiate lymphoma from other breast malignancies. Fine needle aspiration (FNA) cytology is a commonly used procedure in the evaluation of these lesions. Although its sensitivity is 90%, diagnostic pitfalls exist in the use of FNA to diagnose lympho-proliferative disorders. Confirmatory core needle biopsy is recommended by most authors for suspected primary lesions. The histological differential diagnosis of lymphoma includes reactive lymphoid infiltrate, medullary carcinoma, amelanotic melanoma, lobular carcinoma, and poorly differentiated ductal carcinoma<sup>5</sup>. IHC and/or flow cytometry is helpful in differentiating primary breast lymphoma to others.

There has been no uniform approach to the treatment of these tumors. Generally, the treatment is similar to that given for systemic lymphomas of similar histologic type. Thus, low-grade lymphoma may be treated with local excision and/or radiation therapy, whereas high-grade (large cells and Burkitt's) lymphoma should be treated with combination therapy with or without radiotherapy<sup>3</sup>.

## CORRESPONDENCE TO

Prof A K Khanna Department of General Surgery Institute of Medical Sciences Banaras Hindu University Varanasi -

221 005. India. Phone: 0091-542 – 2318418 Fax:  
0091-542-2367568 Email: akhannabhu@gmail.com

## References

1. Uesato M, Miyazawa Y, Gunji Y, Ochiai T. Primary non-Hodgkin's lymphoma of the breast: report of a case with special reference to 380 cases in the Japanese literature. *Breast Cancer*. 2005;12(2):154-8.
2. Antonio Juretiæ, Mirko ivkovia, Mirko Šamija, Davorin Bagoviae, Anka Purišiae, Tomislav Viculin, Matija Bistroviae, Mladen Stanec, Stjepan Juzbašiae, Miro Lesar, Rudolf Tomek. Radiotherapy of Stage IEA Primary Breast Lymphoma: Case Report. *Croatian Medical Journal* 2002.43(5):569-572.
3. Ha CS, Dubey P, Goyal LK, Hess M, Cabanillas F, Cox JD. Localized primary non-Hodgkin lymphoma of the breast. *Am J Clin Oncol* 1998;21:376-80.
4. Wiseman C, Liao KT. Primary lymphoma of the breast. *Cancer* 1972;29:1705-1712
5. Virginia E. Duncan, MD, Vishnu V.B. Reddy, MD, Nirag C. Jhala, MD, David C. Chhieng, MD, Darshana N. Jhala, MD. Non-Hodgkin's lymphoma of the breast: a review of 18 primary and secondary cases. *Annals of Diagnostic Pathology* 10 (2006) 144-148

**Author Information**

**Sanjeev Kumar, MBBS**

Junior Resident, Department of General Surgery, Institute of Medical Sciences, Banaras Hindu University

**Satyendra K. Tiwary, MS**

Senior Resident, Department of General Surgery, Institute of Medical Sciences, Banaras Hindu University

**Rahul Khanna, MS, DNB**

Reader, Department of General Surgery, Institute of Medical Sciences, Banaras Hindu University

**A. K. Khanna, MS, FACS**

Professor, Department of General Surgery, Institute of Medical Sciences, Banaras Hindu University