Case Report

Non-Hodgkin Lymphoma presenting as breast lump

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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%1. We report a case of primary Non Hodgkin Lymphoma of the breast initially misdiagnosed as case of chronic granulomatous mastitis on FNAC.

Key word : Lymphoma, FNAC.

Introduction

Primary lymphomas of the breast are uncommon with incidence only 0.12 – 0.5 %[1]. 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 sometimes it is inconclusive or false reporting as our case was misdiagnosed as chronic granulomatous mastitis.

Case Report

30 years old lactating female presented to us with the complaint of painless lump in the right breast for one year. She denied associated pain, fever, chills, or skin changes. Both axilla and left breast were normal. Her medical history was unremarkable, and review of symptoms was negative for night sweats, weight loss, or fever. On examination patient was conscious, oriented and afebrile. The physical examination was notable for a large lobulated mass, firm in consistency seen in the upper outer quadrant of right breast extending towards right axilla. Left breast was normal. The rest of the physical examination findings were normal.

Investigations

Ultrasonogram of both breasts and axilla revealed there was a cystic area with regular margin contains low level echoes seen within the outer quadrant of right breast, about (3.6x2.8x2.9). Peripheral vascularity is seen-suggestive of galactocele. FNAC showed Chronic granulomatous mastitis. Surgical treatment Wide local excision was performed. Histopathology examination showed non Hodgkin lymphoma of the breast. Immuno-histochemistry was not performed. Metastatic workup revealed no metastasis. The patient was offered post operative chemotherapy in form of CHOP regimen. Presently the patient is under chemotherapy follow up.

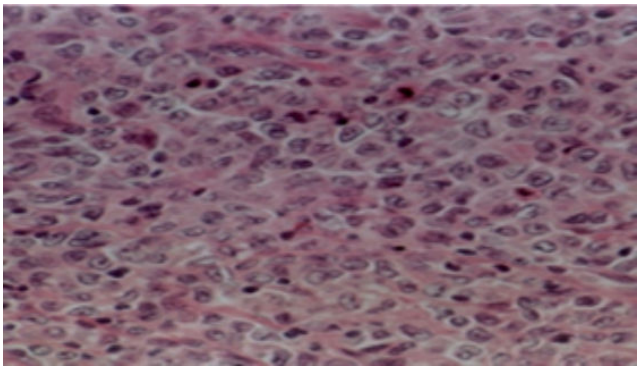

Fig : Microphotograph showing Non-Hodgkin Lymphoma

Discussion

Non Hodgkin Lymphoma involving the breast either as a primary site or as a site of recurrence from lymphoma previously diagnosed elsewhere is rare. Several series have reported varying incidences of primary and secondary cases. Primary NHL of the breast is a rare disease, representing only 0.04%-0.50% of malignant breast neoplasms[2], 1.7% of all extranodal NHL and 0.7% of all NHL[3]. Primary non Hodgkin lymphoma of the breast should fulfill following criteria[4].

(a) adequate pathological evaluation

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(b) both mammary and lymphomatous infiltrate in close association

(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[4]. 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[5].

The treatment of PNHBL (Primary Non Hodgkin's Breast Lymphoma) is similar to that used for other lymphomas and depends on the histological type. Most Clinicians agree that multimodality treatment is necessary[6-8]. However, recent studies have shown that aggressive B-cell lymphomas should always be treated with chemotherapy alone or in combination with radiotherapy[6,9-11]. The most effective combination reported in the literature is radiotherapy and 3 to 10 cycles of treatment with CHOP[6,9]. Only studies with relatively small cohorts of patients have been reported in the literature. For aggressive tumors, the literature recommends CHOP type chemotherapy and mastectomy with lymph node resection, if needed, for management of PNHBL. We were able to achieve an excellent response in our patient. Survival rate of primary breast lymphoma is better as compare to both lobular cases and systemic lymphoma with secondary involvement of breast. Anticancer drugs are main treatment rather than surgery so it is very important to accurately diagnose primary lymphoma of breast.

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. Fischer MG, Chideckel NJ. Primary lymphoma of the breast. Breast 1984; 10: 7-12.
3. Mattia AR, Ferry JA, Harris NL. Breast lymphoma a B-cell lymphoma of mucosa associated lymphoid tissue. Am J Surg Pathol 1993; 17: 574-587.
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 2006; 10: 144-148
6. Wong WW, Schild SE, Halyard MY, Schomberg PJ Primary non-Hodgkin lymphoma of the breast: the Mayo Clinic experience. J Surg Oncol 2002; 80: 19-25.
7. Ribrag V, Bibeau F, El Weshi A, Frayfer J, Fadel C, et al. Primary breast lymphoma: a report of 20 cases. Br J Haematol. 2001; 115: 253-256.
8. Tondini C, Zanini M, Lombardi F, Bengala C, Rocca A, et al.) Combined modality treatment with primary CHOP chemotherapy followed by locoregional irradiation in stage I or II histologically aggressive non-Hodgkin's lymphomas. J Clin Oncol 1993;11: 720-725.
9. Ribrag V, Bibeau F, El Weshi A, Frayfer J, Fadel C, et al. Primary breast lymphoma: a report of 20 cases. Br J Haematol 2001;115: 253-256.
10. Nissen NI, Ersbøll J, Hansen HS, Walbom-Jørgensen S, Pedersen- Bjergaard J, et al. A randomized study of radiotherapy versus radiotherapy plus chemotherapy in stage I-II non-Hodgkin's lymphomas. Cancer. 1983; 52: 1-7.
11. Shafman TD, Mauch PM. The large-cell lymphomas. Semin Radiat Oncol1995; 5: 267-280.