



CASE REPORT

Bilateral Primary Non Hodgkin's Lymphoma of The Breast: A Rare Case Report

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Abstract

About fifty percent of all Non-Hodgkin's lymphomas are primary extranodal non-Hodgkin's lymphomas (NHL). Primary non Hodgkin's lymphoma of the breast is rare. Bilateral involvement of the breasts is even more rare. We present a case of a 40 year old woman presenting with bilateral breast lumps diagnosed on Fine Needle Aspiration Cytology[FNAC] as primary non hodgkin's lymphoma[PNHL].

Key Words

Extranodal Non Hodgkin's Lymphoma, Primary Non Hodgkin's lymphoma, Fine Needle Aspiration Cytology

Introduction

About fifty percent of all Non-Hodgkin's lymphomas are primary extranodal non-Hodgkin's lymphomas. Primary non Hodgkin's lymphoma of the breast is rare. Bilateral involvement of the breasts is even more rare (1).

Primary breast lymphoma (PBL) is a rare disease, which comprises 0.04% to 1.1% of all primary malignant tumors of the breast and 1.7-2.2% of extranodal lymphomas. It also represents 0.7% of all Non-Hodgkin's lymphomas(NHL) (2). However, PNHL is the most frequent haematopoietic tumour of the breast. Majority of the cases are unilateral, however bilateral involvement may be seen (3). In this report, we present a case of a 40 year old woman presenting with bilateral breast lumps without any axillary mass .FNAC was done and a diagnosis of primary Non Hodgkin's lymphoma was made.

Case Report

A 40-year-old woman presented with chief complaint of a palpable mass in both breasts for 3 months. Physical examination revealed enlargement of both breasts with slight tenderness. The overlying skin was stretched and glistening (*Fig.1*). Increased density in both breasts was

found during her mammographic evaluation. This investigation was followed by bilateral breast ultrasonography, in which hypoechoic masses were detected in both breasts. The dimensions of the masses were 6.7 x 5.1 cm in the left breast and 2.1 x 2.1 cm in the right breast. The patient was referred for FNAC of both breasts. During aspiration, adequate blood stained material was obtained, and both air-dried and alcohol-fixed smears were prepared. Air-dried smears were stained with May Grumwald Giemsa(MGG) stain and alcohol fixed smears with Papanicolaou stain. All smears were highly cellular, and the background was hemorrhagic. Smears showed tumour cells dispersed mostly as single cells and less often as groups consisting of a few cells. Nuclei of the tumour cells showed hyperchromasia, high N:C ratio, prominent nucleoli and scant cytoplasm (*Fig 2,3*). A cytological diagnosis of Non Hodgkin's Lymphoma was made.

Discussion

Primary lymphoma of the breast is a rare entity. Most of the primary lymphomas of the breast are of Non Hodgkin's type. Diffuse large cell Non Hodgkin's

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Fig. 1 Clinical Photograph Showing Bilateral Breast

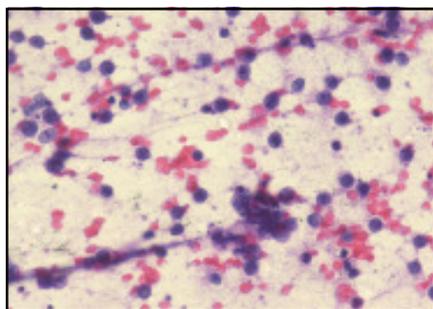


Fig. 3 Aspirate from the Right Breast Swelling Showing Atypical Lymphoid Cells having Prominent Nucleoli. Background Contains Lymphoglandular Bodies. PAP (40x10)

lymphoma is the most common subtype and accounts for 40-70 % of all the cases. Incidence of NHL in breast increases with advancing age. All the primary lymphomas of the breast are of B cell type (4). The diagnosis of primary malignant lymphoma of the breast must satisfy criterias like (i) adequate pathological evaluation (ii) both mammary tissue and infiltrates must be present in close association and (iii) exclusion of either systemic lymphoma or previous extra mammary lymphoma is mandatory (5). In case of lymphoma breast mammogram shows only a homogeneous tumour shadow without either micro calcification or spiculation and it is not considered reliable for diagnosing breast lymphoma. Breast ultrasound reveals a course internal echo, a hypoechoic mass with irregular borders and occasionally a lobulated mass(6).

Diagnosis of breast lymphoma almost always requires excisional biopsy or needle aspiration biopsy. In the present case, FNAC was performed on both breast masses. The cytological picture is similar in most of the lymphomas of breast, with a relatively monomorphic lymphoid cell population, a cornerstone of the diagnosis by aspiration cytology (7). Histopathological examination

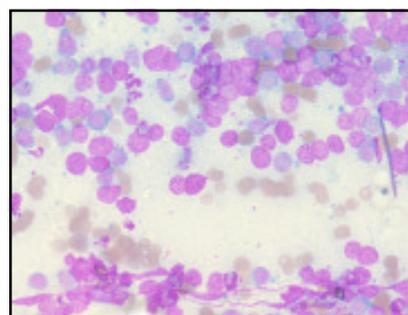


Fig. 2 Aspirate from the Left Breast Swelling Showing Monomorphic Atypical Lymphoid Cells many of which are Showing Prominent Nucleoli. Occasional Immunoblast also seen in the Background. MGG (40x10)

and immunophenotyping are effective tools to rely upon for confirmation of aspiration cytology findings(8).

Conclusion

Although rare, lymphoma should be considered in the differential diagnosis of a breast mass. Detection of lymphoma of breast by FNA is relatively easy due to the monomorphic cytological picture it presents, as at other sites. To the best of our knowledge this case is unique in its clinicopathological presentation and also emphasizes the role of FNAC as a simple, reliable and cost-effective test for exact diagnosis of breast neoplasms so that unnecessary mastectomy can be avoided.

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