

PRIMARY MALIGNANT LYMPHOMA OF THE BREAST

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ABSTRACT

A case of primary malignant non-Hodgkin's lymphoma of the breast is reported. This is the first well-documented case of breast lymphoma in our institution and also in Iran. The diagnosis of primary breast lymphoma requires the presence of lymphomatous infiltration in close association with breast tissue in patients with neither previous lymphoma nor concurrent lymphoma in another site. There is no definite clinical feature to distinguish patients with lymphoma from those with malignant carcinoma. The median age at diagnosis is reportedly in the mid-50's, but our patient was much younger.

Keywords: Breast lymphoma; Non-Hodgkin's lymphoma; Breast-incidence; Histiocytic lymphoma; Large cell

MJIRI, Vol. 10, No. 2, 175-177, 1996.

INTRODUCTION

Primary malignant lymphomas of the breast are a recognized entity despite their alleged rarity. From the few series published on this subject, the incidence is estimated to be 0.05% to 0.53% of all breast malignancies.¹ Most reported cases have been non-Hodgkin's lymphomas.² Hodgkin's disease initially involving the breast is very rare.³ Although they seldom present as a histopathologic diagnostic problem, they may occasionally be difficult to differentiate from medullary or poorly-differentiated carcinomas.⁴ In these cases the ultrastructural features may help distinguish the neoplasms. A case of primary lymphoma of the breast is hereby reported and the literature reviewed.

CASE REPORT

A 17 year old female was admitted to Ghaem Hospital in

January 1995 with a three month history of an enlarging, painless lump in the left breast. She had married five months previously. She was not pregnant and had no history of breast carcinoma in her family. Upon physical examination there was a firm, non-tender mass measuring 10×10 cm that occupied almost all of the left breast. No skin changes were present, but two lymph nodes measuring 2×2 cm were palpated in the left axillary area. Xeroradiography revealed a huge mass in the left breast, while the right breast showed no change and had a normal appearance. Chest x-ray revealed normal hilar and mediastinal structures. Other laboratory studies were within normal limits. Abdominal CT scans were reported as normal. Sternal bone marrow aspiration showed no bone marrow involvement. An excisional biopsy of the mass revealed diffuse, proliferative medium to large sized cells, loosely arranged. The nuclei were either oval, indented or polylobulated, and multinucleated cells were occasionally seen. There was abundant nuclear membrane-associated chromatin, and one or two nucleoli were present in the clear nucleoplasm. Nuclear pleomorphism was marked and mitotic figures were frequently seen.

Many histiocytic lymphomas have been mistaken for

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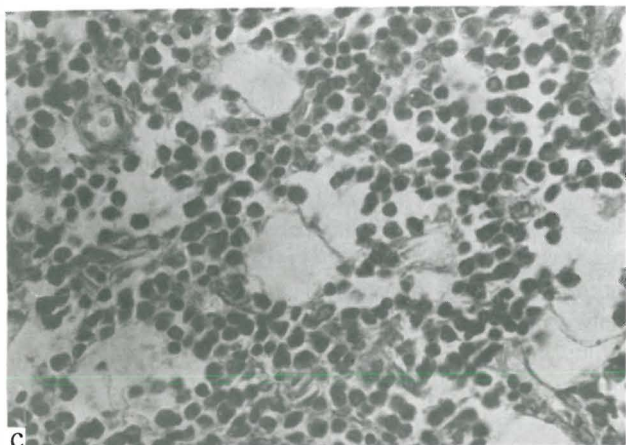
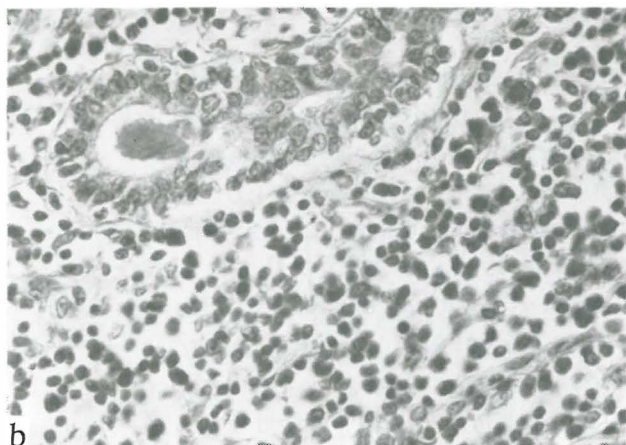
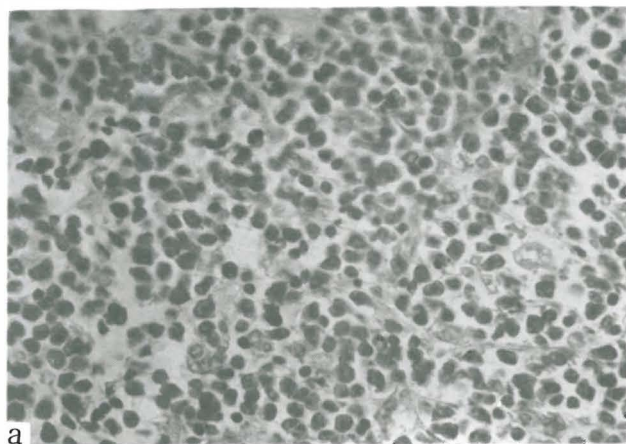


Fig. 1 (a, b, c). Microscopic histiocytic lymphoma.

metastatic carcinoma, malignant melanoma, Hodgkin's disease, and malignant histiocytosis, all of which remain as principal morphologic differential diagnoses. Histiocytic lymphoma cells are usually large and pleomorphic and contain uniform nuclei and abundant cytoplasm. Special staining for reticulin and PAS were carried out, and both were positive. The tumor cells express lymphocyte activation marker CD30, HLA-DR and the IL-2 receptor CD25. Staining for LCA is not available in Mashhad. According to the



Fig. 2. Left breast change is seen.

working formulation classification for clinical usage, it was a high grade, malignant, diffuse, large cell lymphoma. By Rappaport's classification, it was diffuse histiocytic lymphoma.

The patient achieved complete remission following four courses of chemotherapy, but died after 8 months due to extensive abdominal involvement, including the ovaries.

According to Haagensen¹¹ radical mastectomy is not indicated due to the tendency of rapid generalization of lymphomas; therefore our patient underwent chemotherapy.

DISCUSSION

Extranodal presentation is more common in non-Hodgkin's lymphoma than in Hodgkin's disease. Non-Hodgkin's lymphomas start in an extranodal site in about 12-37% of cases, the most frequent site being the upper respiratory and gastrointestinal tracts, bone, thyroid, skin, subdural space, testes, etc. Nevertheless, malignant lymphomas of the breast are rare. Lattes, in 1967, estimated the number of previously reported cases at 80 and added 38 cases under study from his own institution.⁵ In the same year Lawler and Richi reviewed 60 cases from the world literature in the course of reporting a single case.⁶ Since then approximately 70 other cases of primary breast lymphomas have been reported.^{7,8} Because lymphomas of the breast are uncommon they naturally are not suspected prior to biopsy. All cases which have been reported were clinically diagnosed as possible carcinoma of the breast. Of course, it was logical as the age, range, sex and clinical manifestations are in general similar to and indistinguishable from carcinoma of the breast, except for the absence of nipple discharge or retraction.

Lymphoma of the right breast is reported to be more common than the left,⁹ but in our case the left breast was involved. The majority of cases have been classified as

histiocytic or large-cell lesions¹⁰ and presented as stage 1. The prognosis of primary malignant lymphoma of the breast is difficult to ascertain, partially because of the small number of cases. The general impression is that lymphomas of the breast have a poor prognosis, often with rapid progression and death. Twenty-one of Lattes' 33 cases who were followed died; 17 in the first year. Similarly, five of the six patients in Oberman's study were dead within one year¹² and only three of 16 patients in Wiseman and Liao's series were alive at five years.¹³ Of the 33 cases of breast lymphoma based on the data from the end results of the group of cancer registries, the five-year survival rate was listed as 35%.¹⁴ The sole exception to reporting poor survival is the study from Memorial Hospital in New York by DeCosse et al, with a 64% five-year survival for 14 patients.¹⁵

A reliable and definitive statement concerning the prognosis in lymphomas of the breast will ultimately depend on further studies, probably multi-trial and cooperative between major institutions treating a large number of malignant lymphoma patients, utilizing modern clinical staging procedures and a standard histologic classification.

ACKNOWLEDGEMENT

The authors thank Mrs. C. Taheri for preparation of the manuscript and secretarial support.

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