Case Report / *Olgu Sunumu*

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Primary Lymphoma of the Breast: Presentation of Two Cases

Primer Meme Lenfoması: İki Olgu Sunumu

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ABSTRACT

Primary lymphoma of the breast is seen most frequently in the 6th decade and accounts for 0.04-0.5% of breast cancers. Diffuse large B-cell lymphoma is the most common histopathological type. Case 1: A 77-year-old female patient presenting with a painless mass in the breast. Case 2: A 32-year-old postpartum patient presenting with an ever-increasing fever for the past 3 months, night sweats and painful mass in the breast. Primary lymphoma of the breast might be confused clinically and radiologically with other breast cancers. Due to the difference between treatment protocols, a differential diagnosis must be made to distinguish it from other types of breast cancers. Pregnancy-related physiological changes complicate the diagnosis of the breast lymphoma. The cases of the lymphoma clinically mimicking mastitis may be even more complex.

Key words: Breast, large cell lymphoma, diagnosis

ÖZET

Primer meme lenfomaları en sık 6. dekatta görülmekte ve tüm meme kanserlerinin %0,04-0,5'ini oluşturmaktadır. Diffüz büyük B hücreli lenfoma en sık görülen histopatolojik tipidir. Olgu1: memede ağrısız kitle şikayeti ile başvuran 77 yaş bayan hasta. Olgu 2: Yaklaşık 3 aydır giderek artan ateş, gece terlemesi, meme de ağrılı kitle şikayeti ile başvuran 32 yaş post partum hasta. Primer meme lenfomaları klinik ve radyolojik olarak diğer meme kanserleri ile karışabilmektedirler. Tedavi protokollerinin farklılığı nedeniyle mutlaka diğer meme kanserlerinden ayırıcı tanıları yapılmalıdır. Gebeliğe bağlı fizyolojik değişiklikler meme lenfoması tanısını güçleştirmektedir, mastit'i taklit eden lenfoma olgularında durum daha da karmaşık hale gelebilmektedir.

Anahtar sözcükler: Meme, büyük hücreli lenfoma, tanı

Introduction

Primary lymphoma of the breast (PLB) is the condition in which the involvement is limited to the breast and no involvement in any other localization of the body is present (1). PLB accounts for 0.04-0.5% of all lymphoma types with an incidence rate of 0.38-0.7% (2). The age of incidence ranges from 9 to 85 years old, while being most commonly seen in the sixth decade (3). In many series, diffuse large B-cell lymphoma is reported as the most common subtype for PLB (4, 5). PLB is highly similar to breast cancer in terms of clinical findings. The common symptom in both diseases is a painless mass in the breast, which leads to major confusion (6). To eliminate this confusion, a differential diagnosis must be performed since both diseases require different treatment procedures. We undertook this study to investigate two distinct cases of PLB.

Case Reports

Case 1

A 77-year-old female patient presented with a painless mass in her left breast and a lump in her left armpit. Physical examination revealed a 6x5 cm mass in the upper outer quadrant of the left breast. Ultrasound (USG) and mammography confirmed a 68x41x42 mm sized, regular, lobulated, solid mass located in the upper outer quadrant of the left breast stretching towards the retroareolar area (Figure 1). A tru-cut biopsy was performed for the mass. Histopathological assessment confirmed the diagnosis of diffuse large B-cell lymphoma (Figure 2a, b). Seeing that no involvement in any other localization of the body was detected and that the lymphoma was limited to the breasts, the patient was confirmed with PLB and was started on six regimens of chemotherapy (CT) with rituximab, cyclophosphamide, epirubicin, vincristine, prednisone (RCHOP). The patient is still in remission and is being followed up on her visits.

Case 2

A 32-year-old female patient presented with a lump, pain, and discoloration in the left breast along with the symptoms of night sweating and fever. In the evaluation of the history, it was revealed that the symptoms had begun on the 22nd week of her pregnancy and that she had

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a cervico-vaginal delivery on the 31st week. It was also revealed that the patient had been suffering from the symptoms for the past 3 months but had not applied to a clinic since she had misconceived them as pregnancy-related symptoms. Following the delivery, she applied to a clinic due to increasing symptoms and was diagnosed with mastitis and treated accordingly. The patient applied to our clinic as the symptoms had become even more severe despite the treatment given in that clinic. In the initial physical examination, it was observed that the size of the left breast was remarkably bigger than the right and that the breast skin was not only edematous and tender but also had considerable expansive hyperemic areas. Also present were conglomerate lymphadenopathies in the left axillary area which were up to 5 cm in size. A tru-cut biopsy was performed for the breast. The biopsy result suggested the presence of lymphoma, but to elicit a definitive diagnosis an excisional biopsy was performed on the axillary lymph node. Collective results confirmed the definitive diagnosis of diffuse large B-cell lymphoma and the patient underwent two regimens of CT with RCHOP. Following the CT, it was noted that the patient no longer had any symptoms such as night sweating, fever, or pain and that the breast had decreased in size but there was still small-scale erythema on the breast skin (Figure 3). The patient is in remission and is still being followed and treated on her visits.

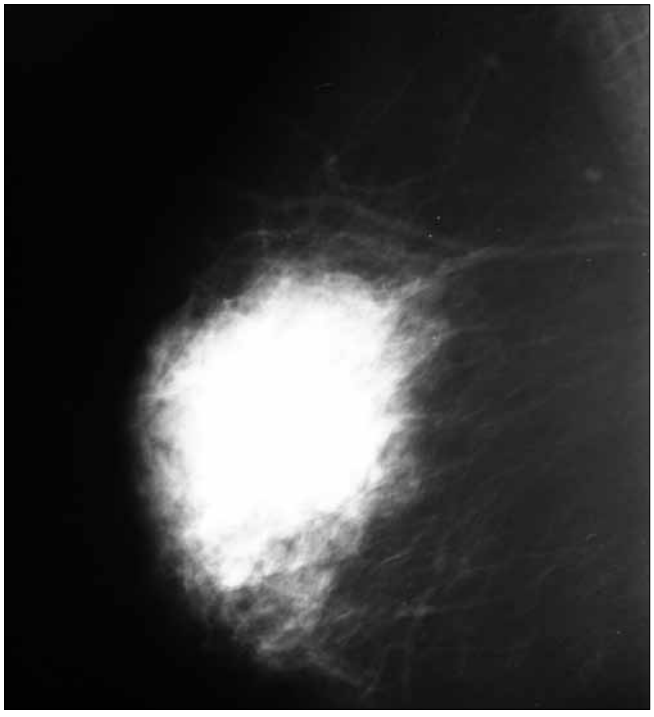

Figure 1. Mediolateral oblique mammogram views for the 6-cm lobulated, contoured, hyperdense mass and axillary lymph node

Discussion and Conclusions

Primary lymphoma of the breast (PLB) is a rare condition which is less frequent than the metastatic lymphoreticular malignancies of the breast, while being frequently seen in women aged between 50 and 60 years (7-9). However, neither of our cases was in this range. Also, both of them presented with axillary lymph node involvement which is reported to occur in only 30-50% of such cases. Therefore, the differential diagnosis should look into other breast malignities, fibroadenoma, phyllodes tumor, and metastasis as well (9).

Lymphomas of the breast present similar symptoms as the ones in breast cancer. Brustein et al. (6) reported that 93% of their 53 patients presented with a painless mass in the breast at admission. In a similar vein, Ganjoo et al. (5) reported a rate of 65% for the painless mass and

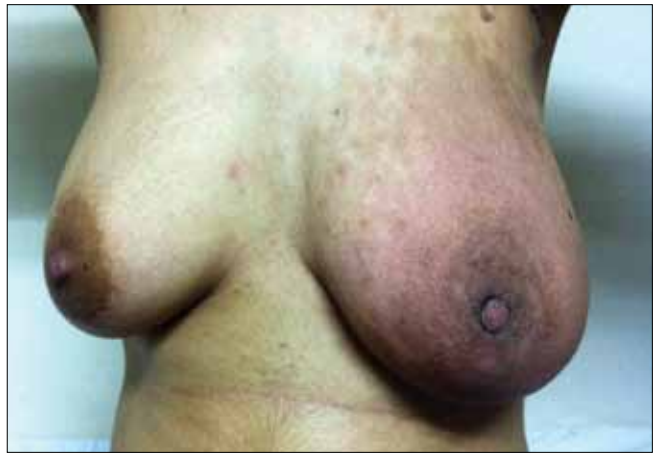

Figure 3. Image of the left breast which is larger than the right and presents with slight erythema

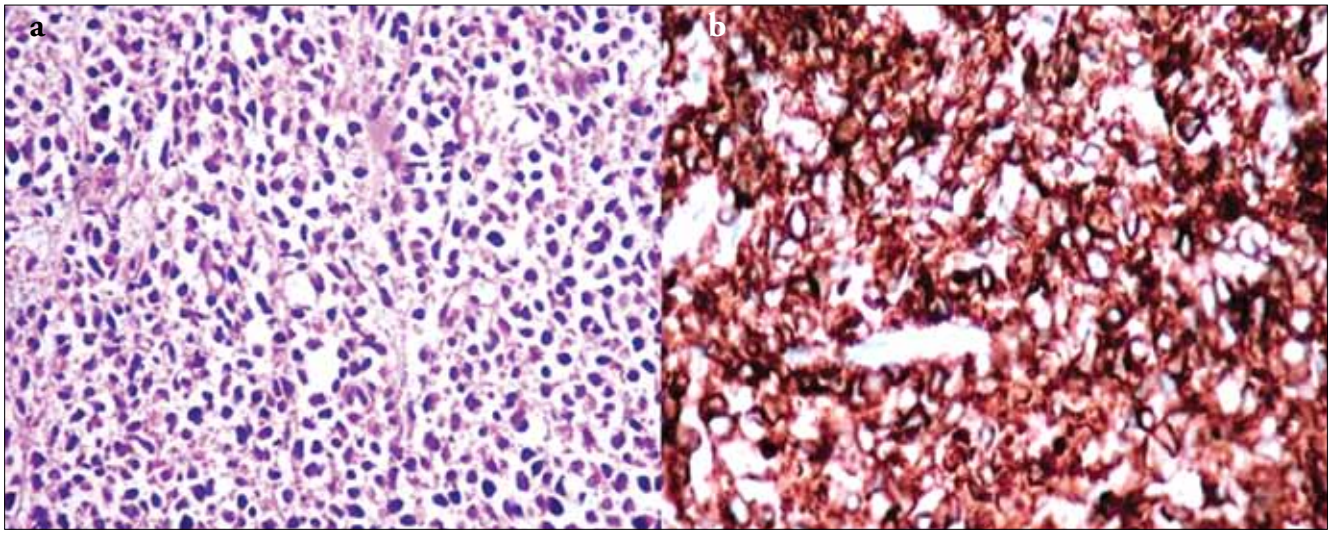

Figure 2. (a) Diffuse atypical lymphoid cell infiltration ((H&E, 200x) (b) Atypical lymphoid cells stained with CD 20 (Immunoperoxidase, 400x)

a rate of 24% for the presentation of abnormal mammography findings. As for the present study, the first case presented with a painless mass in the breast while the second was present with a systemic fever, which had been ongoing for the past three months, plus a continuously growing, painful mass in the breast. We consider that the pain in the second case was due to the contraction on the breast skin resulting from delayed diagnosis.

Jennings et al. (10) conducted a meta-analytic study in a series of 465 cases and defined the diffuse large B-cell lymphoma as the most frequently seen (53%) histopathological type. Likewise, this type was histologically confirmed in both of our patients. The ideal treatment for this type is CT with RCHOP (5). The 5-year survival rate in the larger series is 46% to 61% through the use of Rituximab-based chemotherapy protocols (5, 11). Surgical resection is considered only for the diagnosis of these cases since it has not been confirmed to contribute to the patients' survival rates (10). As performed in our second case, the cases that cannot be diagnosed by breast biopsy alone should undertake axillary biopsy as well so as to provide a definitive diagnosis.

Breast cancer in pregnancy is hard to diagnose. The symptoms that are likened to the pregnancy-related symptoms and the disuse of mammography for the pregnant women are reported as the major reasons. Furthermore, there is a scarcity in the number of studies concerning the breast lymphomas during pregnancy. Unlike breast cancer, the lesions in PLB are more regular and shaped like an indefinite mass, which make the diagnosis of breast lymphomas more complicated. Another challenge is that the lymphomas are liable to mimic mastitis. Sultan et al. (12) reported a 22-year-old case who presented with a lymphoma mimicking mastitis. Similarly, the second case in our study had also been treated in a primary care clinic with the diagnosis of mastitis and was transferred to our clinic when she was proven unresponsive to the treatment.

As described for the first case of our study, in mammograms the lymphomas of the breast are viewed as masses that are regular in contour, round or slightly lobulated and contain no calcification (7). Some patients, on the other hand, may be present with a lump in their axillary lymph nodes or thickened skin due to retrograde edema. Yet, there are no precise radiological images for such cases (7, 8).

We conclude that the lymphoma of the breast is easy to diagnose and treat through the histopathologic investigation of the patient presenting with a mass in the breast; however, the diagnosis of the pregnant patients can be a challenging procedure. As reported in this study, since the patients may present with various clinical and radiological findings, attention should be given to avoid inaccurate diagnoses and treatments.

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