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Case Report
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Primary Follicular Lymphoma of the Breast: A Case Report

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Abstract

Primary Breast Lymphoma (PBL) is exceedingly rare, accounting for a small fraction of extranodal non-Hodgkin lymphomas. Here, we report a case of primary Follicular Lymphoma (FL) of the breast, which required diagnostic clarity through multiple biopsies and was successfully treated with a Rituximab and Bendamustine (RB) regimen.

Introduction

Primary breast lymphoma is a rare entity that can be challenging to differentiate from primary breast carcinoma based on clinical presentation and imaging. Follicular Lymphoma (FL), a subtype of non-Hodgkin lymphoma, is even more rare within the breast. Early and accurate diagnosis is essential for determining the appropriate treatment pathway and improving patient outcomes [1-3].

Case Presentation

A 63-year-old woman presented with a palpable, non-tender mass in her right breast. She had no significant past medical history and no family history of breast cancer. Mammography and ultrasound suggested a suspicious lesion, warranting further investigation.

Investigations

A core needle biopsy of the breast mass initially suggested a lymphoid neoplasm. Immunohistochemical analysis revealed a follicular growth pattern. Repeated biopsies from the breast mass and an ipsilateral axillary lymph node showed a mix of centrocytes and centroblasts, consistent with FL. The biopsies displayed markers positive for CD20, CD10, and BCL-2, confirming the diagnosis of FL.

A Positron Emission Tomography (PET) scan was conducted for staging and revealed hypermetabolic activity confined to the breast and regional lymph nodes, consistent with Stage IIE disease as per the Ann Arbor staging system.

Treatment

Given the patient's overall good health and the confirmed diagnosis of primary FL of the breast, she was started on the RB regimen, consisting of Rituximab and Bendamustine. This regimen has been noted for its manageable safety profile and efficacy, particularly in patients unsuitable for more aggressive treatment protocols.

Outcome and Follow-up

The patient completed six cycles of RB therapy. Follow-up imaging, including a repeat PET scan, demonstrated complete metabolic response with no evidence of residual disease in the breast or lymph nodes.

The patient's tolerance to the RB regimen was excellent, with minimal side effects reported. She continues to be under regular surveillance with clinical exams and periodic imaging to monitor for recurrence.

Discussion

Primary Breast Lymphoma (PBL) remains a rare diagnosis, representing about 0.04% to 0.5% of extranodal non-Hodgkin lymphomas. Secondary breast involvement is comparatively more frequent. Follicular lymphoma's presentation in the breast, although rare, can mimic primary breast malignancies [4-8].

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Histopathological analysis showing a follicular growth pattern combined with immunohistochemical markers such as CD20, CD10, and BCL-2 is crucial for diagnosing FL. While R-CHOP is traditionally used, the RB regimen has emerged as a viable alternative, showing similar efficacy and improved safety in certain patient populations.

This case underscores the necessity of histopathological and immunohistochemical confirmation in the diagnostic workup of breast masses suggestive of lymphoma. It also highlights the efficacy of the RB regimen in treating FL, particularly in patients who may not tolerate more aggressive chemotherapy.

Conclusion

This case exemplifies the diagnostic challenges and successful management of primary follicular lymphoma of the breast. A meticulous approach involving repeated biopsies, accurate staging, and the selection of an appropriate chemotherapy regimen can lead to successful outcomes. The RB regimen's efficacy in this case supports its role as a potential first-line treatment in patients with similar presentations.

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