

Synchronous Skull and Breast Manifestation of Primary Mesenteric Lymph Nodal Non Hodgkins Lymphoma

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Bone and soft tissue involvement is a common finding in many types of lymphoma. However synchronous involvement of cranial vault and breast is extremely rare. Further imaging studies to find the origin and extent; may demonstrate concurrent disease in lymph nodes. Such unique constellations of findings in a 64 years female are therefore presented in this case report.

Case Report

A 64 years female presented with gradually increasing swelling over the skull for the past 6 months. Although initially it was painless, recently she starting noticing giddiness and headache. On palpation, left lateral aspect of the skull demonstrated a firm swelling. In addition, clinical examination also revealed a firm palpable mass in right breast, which she had noticed around 2-3 months ago but had neglected as it was not causing her any discomfort. Her contrast CT head image (**Figure 1**) shows an intracranial extra-axial biconvex enhancing mass in left temporo-parietal region, destroying the cranial bones and extending into adjacent scalp.

Mammography (**Figure 2**) showed a radio-opaque mass occupying the right breast. Abdominal ultrasound (**Figure 3**) showed multiple, enlarged, well-defined

Clinical and Imaging features are non specific for lymphomas involving skull and breast. This entity must always be considered as a possible diagnosis when dealing with skull or breast masses. Biopsy for histopathological analysis and immunohistochemistry along with thorough whole body imaging to rule out any other lesions is essential for the final confirmation. This case report describes the synchronous skull and breast manifestation of primary mesenteric lymph nodal Non Hodgkin`s Lymphoma that was seen in a 64 years female.

Key words: breast, lymphoma, skull.

hypochoic mesenteric lymph nodes that were highly vascular on Color Doppler. Immunohistochemistry (**Figure. 4**) from breast lesion showed positive CD 20 marker expression typical of B-cell lymphomas.

The final diagnosis of B-cell lymphoma originating in abdominal nodes and manifesting as lesions in skull and breast was thus established as fine needle aspiration cytology from skull mass and mesenteric nodes also confirmed B-cell lymphoma and the patient was then referred to Oncology department.

Discussion

Non-Hodgkin's lymphoma is cancer of the lymphoid tissue, which includes the lymph nodes, spleen, and other organs of the immune system.⁵

Lymph nodes are the commonest site for origin of Lymphomas. Extranodal lymphomas are however common in the skin.²

Common primary sites from which skull lesions can arise are breast cancer (55%), lung cancer (14%), prostate cancer (6%), malignant lymphoma (5%), and others (20%). The mean time from primary diagnosis to skull metastasis diagnosis was 4 months for malignant lymphoma. Calvarial circumscribed intraosseous metastases were found most frequently (27%). The patients are mainly asymptomatic.⁶



Figure 1: Scout image showing an enhancing intracranial extra-axial mass extending through the calvarium into the scalp.

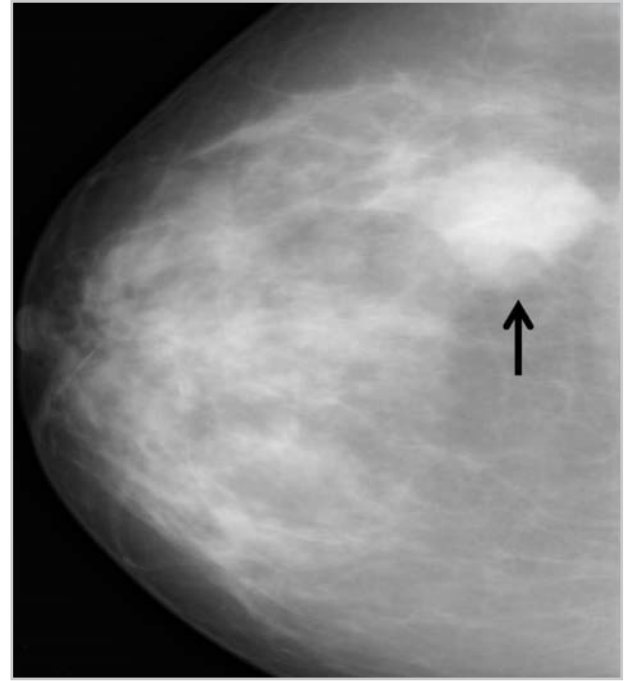


Figure 2: Mammography shows a single radio-opaque mass in right breast.

Primary diffuse large B-cell lymphomas of the dura and scalp can exist independently without intervening cranial vault invasion. Malignant lymphoma should be considered in the differential diagnosis of scalp and dural tumors without intervening skull bone invasion.⁷

In contrast to primary skull lymphomas, Primary Breast Lymphoma is a rare entity and accounts for only 0.15% of all the malignant breast lesions.⁸ In breasts, the B-cell lymphoma is reported to be more prevalent than the T-cell lymphomas.

Although the exact aetiology is still understood, chronic infection, immune suppression, exposures to ionizing radiation and hereditary traits are the proposed risk factors.⁵

Secondary breast lymphomas are more common and usually present with simultaneous disease in the breast and extra mammary organs.⁹ The median age of onset of for non-Hodgkin breast lymphoma is 58 years. Males as well as females are reported to suffer from it. Our patient was an elderly female and had focal unilateral breast involvement.

Patients usually present with a painless breast mass, a quarter of which are painful. Inflammatory skin change and overlying skin fixation may be encountered. Nipple or skin retraction or discharge is uncommon.⁹ The case reported by us presented with painless progressive swelling without any overlying skin or nipple changes.

Mammographic findings in breast lymphoma are not characteristic and show a high density focal or diffuse mass lesion, with or without skin thickening. Microcalcification

and spiculation are rare.⁴ In the case described by us, a focal radio-opaque density was seen to involve right left breast. No calcifications were present.

Lymph nodes involved by lymphoma, are round in shape. The central hilum is no more visible and the entire node becomes hypoechoic like a black grape. On color Doppler, increased vascularity is also seen.¹ These findings were seen in the lymph nodes in our patient as well.

Treatment of Lymphoma is based on the staging. For skull lesions, treatment consists of surgery alone, surgery in combination with radiotherapy and or chemotherapy.^{3,7} Radiation therapy improves the quality of life of patients with neurological symptoms.⁶ For lymphoma of breast, radiation therapy can be used to provide effective local control or may be adjuvant to chemotherapy.⁵ At present, our patient is on chemotherapy. Radiotherapy is planned for skull lesion.

Conclusions

Clinical and Imaging features are non specific for lymphomas involving skull and breast. This entity must always be considered as a possible diagnosis when dealing with non specific skull or breast masses. Biopsy for histopathological analysis and immunohistochemistry along with thorough imaging to rule out any other lesions is essential for final confirmation. As there is a huge potential for poor prognosis with some of the more aggressive malignancies that can be found in this anatomic areas, the

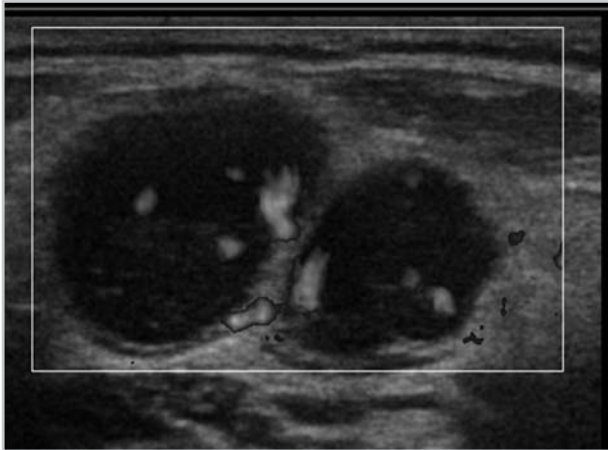


Figure 3: Color Doppler ultrasound shows enlarged abdominal nodes with increased vascularity.

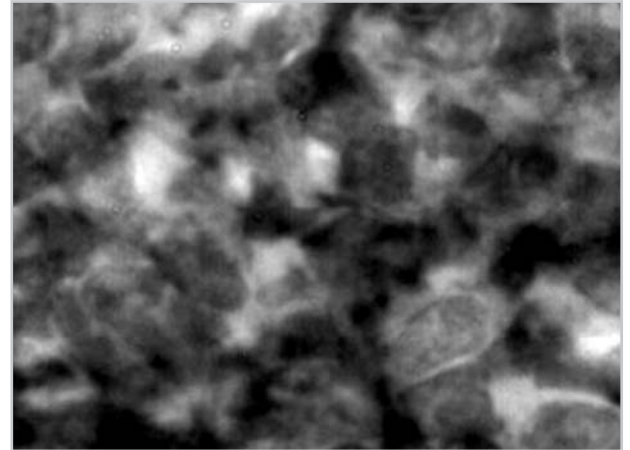


Figure 4: Immunohistochemistry was positive for CD 20 marker typical of B-cell lymphomas.

importance of a thorough physical examination cannot be emphasized enough, and early detection is critical to provide patients with the best chance for a favorable outcome. The treatment should be tailored as per the individual case.

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