Case Report
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Solitary Extramedullary Plasmacytoma of Breast- A Rare Case Report

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Abstract

Background: Extramedullary plasmacytoma accounts for less than 5% of plasma cell neoplasm. Primary breast plasmacytoma is extremely rare condition encountered in clinical practice without any bone marrow involvement or as secondary from multiple myeloma. It can mimic various benign and malignant lesions in the breast hence it should be kept in differential diagnosis as management would completely differ. Meticulous approach is needed in evaluation like CT scan of upper airway, Histopathological examination, Bone marrow biopsy, emphasizing the importance of each in arriving at a diagnosis. The incidence of breast plasmacytoma is very rare accounting to less than 5% in which only 15-16 cases of solitary breast plasmacytoma have been reported over the last 80 years and hence there is a lack of standard clinical or radiological criteria criteria in the diagnosis and management of breast plasmacytoma. In this study we report solitary extramedullary plasmacytoma of left breast in 70-year-old women with meticulous stepwise approach.

Keywords: Plasmacytoma of breast • Chemotherapy • Radiotherapy • Bone marrow examination

Introduction

A 70 year old post-menopausal lady presented to our OPD with history of swelling over left breast for about 6 months of duration associated with pain. Previous history of trauma present 6 month back, no positive history of nipple discharge, nipple retraction, weight loss or any systemic symptoms present. On examination discrete lump of about 8x7 cm seen in upper inner quadrant of left breast which was firm, fixed, breached the skin and underlying tissue as shown in . CT scan of the upper airway and thorax was also done as a part of workup with discrete markings of the lump breast as shown . FNAC showed features of plasma cells with large amount of basophilic cytoplasm, eccentric nuclei, binucleate forms, mature cells and mitosis as shown in . Following wide local excision of mass sent for histopathological examination revealed plasmacytoid background. Iimmunohistochemistry studies showed positive for plasma cell, light chain such as lambda chain restriction as shown in and diagnosis of

Figure 1. Showing discrete lump of 8*7 cm in left breast.

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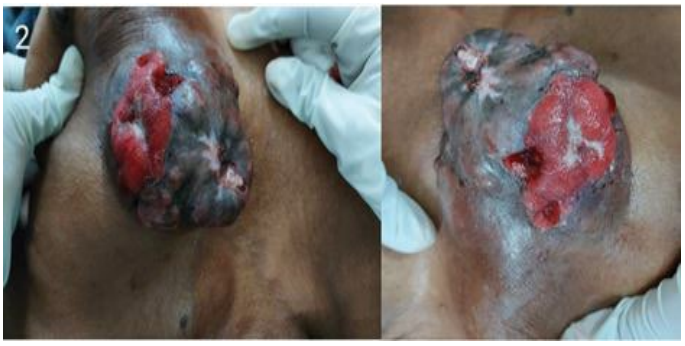

Figure 2. Showing other views of lump of size 8*7 cm in left breast.

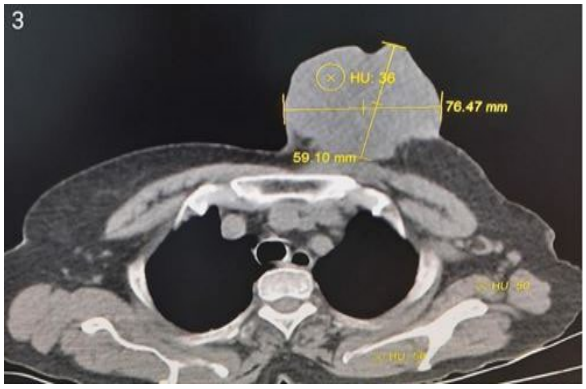

Figure 3. Showing CT axial view thorax with markings of lump over left breast.

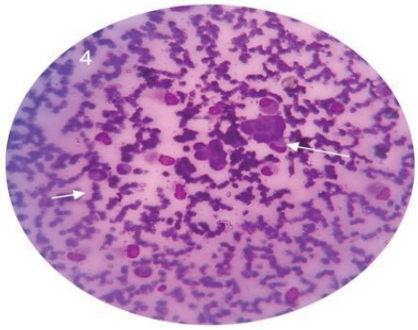

Figure 4. Showing plasma cell with basophilic cytoplasm, eccentric nuclei, binucleate, mature cells, mitosis.

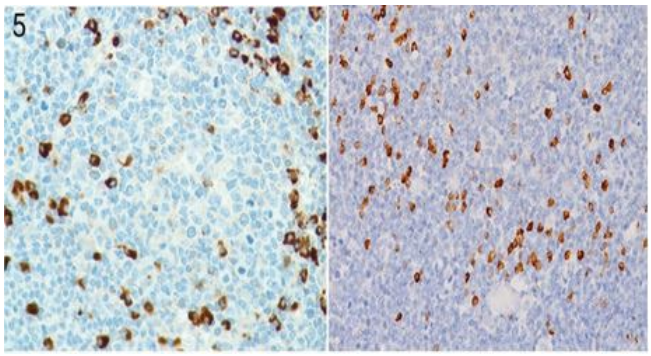

Figure 5. Showing plasma cell and light chain positivity in immunohistochemistry.

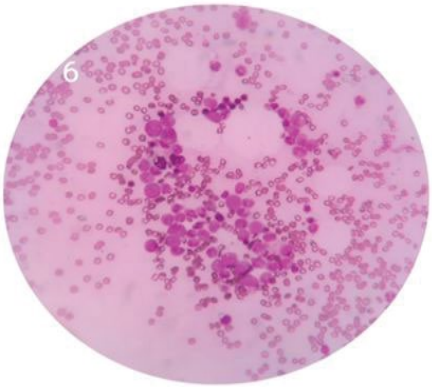

Figure 6. Showing normal bone marrow biopsy examination with no evidence of any myeloma features.

plasmacytoma was made. Extensive search to look for primary lesion including bone marrow biopsy as shown in , Immunoelectrophoretic, skeletal survey, Bence jones protein, CT of upper aero digestive tract to look for synchronous lesions were negative. She received 3 cycles of adjuvant chemotherapy of 20mg dexamethasone, 20 mg Adriamycin and 2mg vincristine every 21 days. Further on follow up with serial clinical and imaging studies no recurrence was noted. On 18 months of follow up patient had no recurrence of disease.

Case Report

Primary breast plasmacytoma is extremely rare condition. Extramedullary plasmacytoma are localised plasma cell tumour arising at sites other than bone marrow. It accounts for less than 5% of Plasma cell neoplasm with median age of 55 years more commonly seen in males (66%) than females . 75%-80% of extra medullary plasmacytoma is seen in upper respiratory tract being most common site it can also be seen in other sites such as thyroid, breast, parotid, testes . 15% of Plasmacytoma of upper respiratory tract spread to lymph nodes. Here we present a case of 70-year-old female diagnosed as solitary extra medullary plasmacytoma. In a study conducted by Alexey et al on the incidence of breast plasmacytoma was only 0.7% . Breast plasmacytoma manifest as palpable breast mass in 82%, most commonly present as unilateral (66%). Breast pain, skin erythema, lymph node involvement are rare. In few cases skin thickening and inflammatory signs occur mimicking breast abscess or inflammatory carcinoma . Biopsy proven solitary lesion of breast/soft tissue with evidence of plasma cells is required to arrive at a diagnosis of solitary breast plasmacytoma Similarly bone marrow examination from posterior iliac crest aspiration using trephine biopsy which showed no evidence of plasma cell dyscrasia is important because in a study conducted by surov et al of 53 patients with breast plasmacytoma 85% had secondary breast plasmacytoma from spread of multiple myeloma . Solitary extramedullary plasmacytoma of breast is extremely rare and the incidence is of the order 0.001% . Hence Bone marrow examination along with skeletal survey is mandatory to rule out Multiple myeloma. Base line investigations like complete blood count, liver function test, renal function test done to exclude any end organ damage. Most common site for extra medullary plasmacytoma is upper airway system around 75%-85% and hence CT scan of upper airway should be done to rule out synchronous lesion . The above-mentioned meticulous step wise investigations form the criteria for diagnosing solitary extra medullary plasmacytoma. Treatment of primary breast plasmacytoma is local eradication by surgical excision followed by chemotherapy/radiotherapy . One fourth of cases is prone for recurrence hence chemo/radiotherapy is indicated. Metastasis is rarely seen. 10-year disease free survival is reported to be 70% [8].

Conclusion

Our case emphasizes the meticulous evaluation of investigations that would help in differential diagnosis and aid in correct management of breast plasmacytoma thereby avoiding unnecessary extensive surgeries and long cyclic cytotoxic chemotherapy. Hence primary breast plasmacytoma should be kept in mind of treating clinicians.

Conflicts of Interest/Competing Interest

Nil

Funding

Nil

Ethics Approval

Not applicable.

Consent to Participate

Written informed consent for publication of their clinical details and/ or clinical images was obtained from the patient.

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