

A Rare Case Report of Occult Ductal Carcinoma in Situ (DCIS) Presenting as an Axillary Nodal Mass

Dr. Vidhi Shah¹, Dr. Priya Eshpuniyani², Dr. Sameer Pathan³, Dr. Raman Deshpande⁴

¹Consulting Breast Surgeon, ²Thoracic Surgeon, ³Pathology, ⁴Surgeon
Asian Cancer Institute Cumballa Hill Hospital, Mumbai, Maharashtra

Abstract:- Ductal Carcinoma in Situ (DCIS) is defined as the presence of cancerous cells in the breast duct or lobule in the absence of a breach of the basement membrane. [1,2] It is associated with less than a 4% incidence of nodal metastases. We report the case of an 83-year-old woman who presented with a solitary left axillary lump. On investigation, she was found to have a left axillary nodal mass with an occult breast primary. She underwent modified radical mastectomy with final histopathology showing DCIS in the breast with invasive ductal carcinoma in the axillary lymph node (Immunohistochemistry: Estrogen receptor (ER) and Progesterone Receptor (PR) negative/Her2 Receptor-positive). At the end of a year's follow-up after surgery, the patient has finished 17 cycles of trastuzumab and is still alive and disease-free.

Keywords:- Breast Cancer, DCIS (Ductal Carcinoma In Situ), Metastasis, Mammography, Tumor Markers

I. INTRODUCTION

Breast cancer affects women more frequently than it does men, and both its incidence and mortality have increased recently[3]. DCIS is frequently identified on mammography as a breast lump or as a diffuse or cluster of pleomorphic microcalcification. Only 3% of patients with a Pure DCIS final diagnosis have lymph nodes that are positive, But patients presenting as metastatic axillary nodal mass with Invasive ductal carcinoma having occult primary DCIS in the Breast are rare [4].

II. CASE PRESENTATION

83 years old lady with no comorbidities, presented in December 2019 with presenting symptom of left axillary region painless lump since 3 months. Upon examination, there was a single, 5 x 4 cm, firm mass in the left axilla. There was no other palpable lump in the body. Systemic examination was normal. The patient was advised Trucut Biopsy, Trucut biopsy of the mass revealed metastatic adenocarcinoma of the thyroid or breast. Bilateral mammography showed Left axillary non-necrotic, hypoechoic Lymph node measuring 4.4 x.4 cm, with loss of fatty hilum and Tiny benign calcific focus in the left breast as seen in Figure 01. PET CT showed multiple nodules in the left lobe of the thyroid (SUV max: 1.56) with a Left Axillary Nodal mass of 3.9x3 cms (Suv Max: 6.89) with few adjacent sub-centimeter nodes (SUV max: 2.590).Heterogeneously enhancing FDG avid right intraparotid lymph node was noted and was approximately 1.6 x1.2 cm in dimension (SUV Max 3.07).

There was no evidence of disease elsewhere, as seen in figure 02. FNAC of the thyroid nodules confirmed Benign multinodular Goiter. Block review of the breast biopsy with immunohistochemistry (IHC) revealed metastases of Mammary ductal Carcinoma which were ER negative, PR negative, Her2 Neu positive (3+), E Cadherin Positive, GATA 3 Positive, AR: 60%, Mib: 28 %. Given normal mammogram and biopsy report suggestive of mammary origin, MRI of breasts was done which showed Segmental Heterogenous Nonmass enhancement of approximately 2 cm in left breast at 8 O'clock position, BI-RADS Category - 4 with left axillary nodal mass. There was no significant associated pathology in the Right breast and axilla as seen in figure 03 & Figure 04.

The patient underwent left Modified radical mastectomy and final Histopathology revealed Ductal carcinoma in-situ Grade III measuring 2.5 x 2.0 x 1.5 cms which were of, Solid, cribriform, comedo and papillary pattern, all margins free and no focus of DCIS, with solitary 6.0 x4.0 x 4.0 cms axillary nodal mass. Only 2 out of 16 lymph nodes were positive for metastatic carcinoma with perinodal extension.

Following surgery, a multidisciplinary tumor board meeting was held, and the patient began a single-agent targeted therapy regimen (trastuzumab) under close cardiac observation. At the one-year follow-up, the patient had completed 17 cycles of trastuzumab and was disease-free.

III. DISCUSSION

Incidence of DCIS is approximately 20 % of newly diagnosed breast cancer each year.[5] To screen for breast cancer to perform an early diagnosis, mammography, clinical examination by a trained team, and breast self-examination (BSE) is advised. According to our knowledge, very little research has been done on the treatment of occult ductal carcinoma in situ (DCIS), which manifests as an axillary nodal mass. Ductal carcinoma in situ has been assumed to be a precancerous lesion and a precursor to invasive carcinoma of the breast also known as Stage 0 breast cancer [6]. As per definition, DCIS does not invade the basement membrane, hence nodal metastasis is not expected. Tada et reported a low incidence of sentinel lymph nodal metastasis in pure DCIS and therefore axillary sentinel node biopsy is not routinely advised. However, Moore et al., who promoted sentinel lymph node biopsy in cases of pure DCIS, do not claim that sentinel lymph node biopsy ought to be performed in every instance of pure DCIS[7]. They noted that the peri tumoral lymphatic invasion is low in the cases of Pure DCIS [8]. DCIS frequently manifests as a breast lump, nipple discharge stained with blood, or pleomorphic

microcalcification seen on screening mammography. Our patient unexpectedly came to us with a large axillary nodal mass but no discernible breast mass.

In our patient Mammogram and PET CT scan could not identify a primary breast lesion with axillary biopsy being metastases from primary breast malignancy. ACR lists axillary lymphadenopathy with unknown primary breast lesions as one of the current indications for MRI breasts. [9,10,11]. Hence, we performed an MRI of both breasts which revealed Heterogenous Nonmass enhancement at 8'O clock position in the left breast- BI-RADS Category - 4.

Management of DCIS follows similar guidelines as invasive ductal carcinoma with surgical options of either breast conservation or mastectomy. Our patient opted for a left modified radical mastectomy with axillary nodal dissection because of advanced age. One of the theories for pure DCIS to have metastasis is that small vessels are identified in the breast duct lumen, especially in the mucinous variety of DCIS which are responsible for metastases without breach of the basement membrane. [12] Another hypothesis is that metastasis could result from iatrogenic spread brought on by tumor biopsy-induced mechanical dispersion of tumor cells. [13,14,15].

Both of these theories do not apply to our patient because the biopsy was performed after the patient complained of an axillary mass and the histology is not mucinous DCIS. Pure DCIS with microscopic metastasis to axillary lymph nodes has been described as rare in the literature and to the best of our knowledge, there haven't been any cases of pure DCIS patients who have only developed a large metastatic axillary lymph nodal mass.

IV. CONCLUSION

The literature describes pure DCIS with microscopic metastasis to axillary lymph nodes as being uncommon. Management of DCIS especially for invasive ductal carcinoma consists of two surgical options for treatment: breast conservation or mastectomy.

Due to the screening option provided by the Unified Health System, mammography, which is thought to be the most effective technique for early diagnosis of breast cancer, DCIS has been identified more frequently. Therefore, we stress the significance of performing routine exams, even on asymptomatic individuals, to find clinically occult breast cancer at an earlier stage. Therefore, increasing the cure rate is the most efficient way to lower breast cancer mortality. This also leads to less aggressive treatment, a higher quality of life, and lower public health spending.

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ILLUSTRATIONS

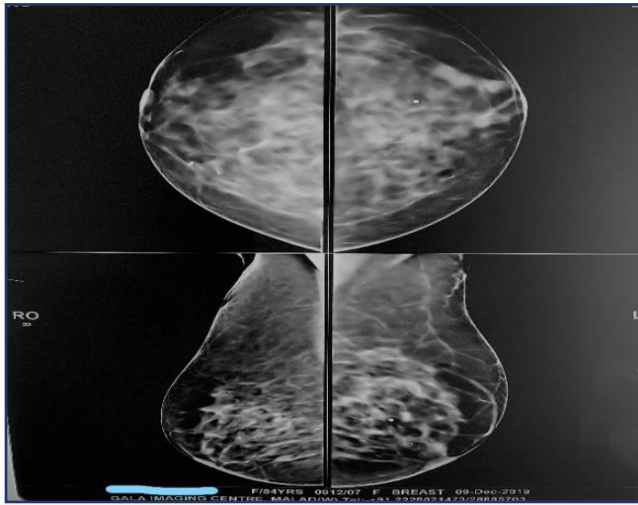


Fig 1: Left axillary solitary nodal mass with loss of fatty hilum

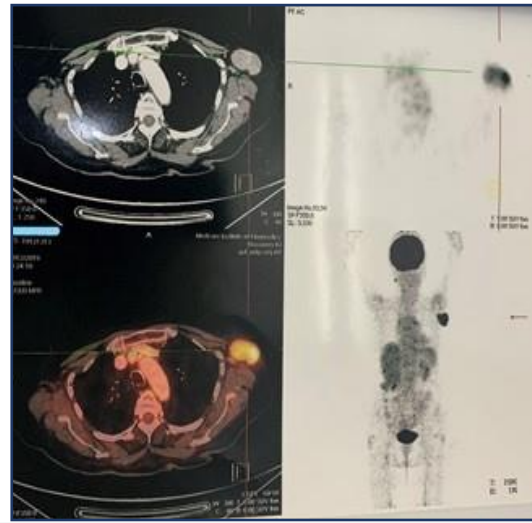


Fig. 2: Whole body PET CT showed a large axillary nodal mass with nodules in the left lobe of the thyroid. Both breasts are normal.

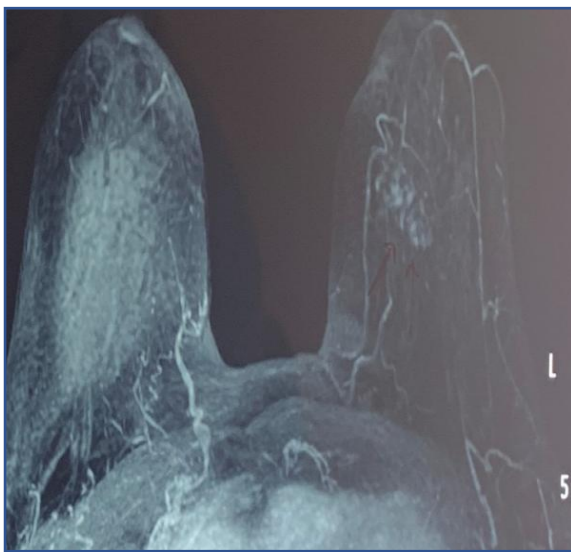


Fig. 3

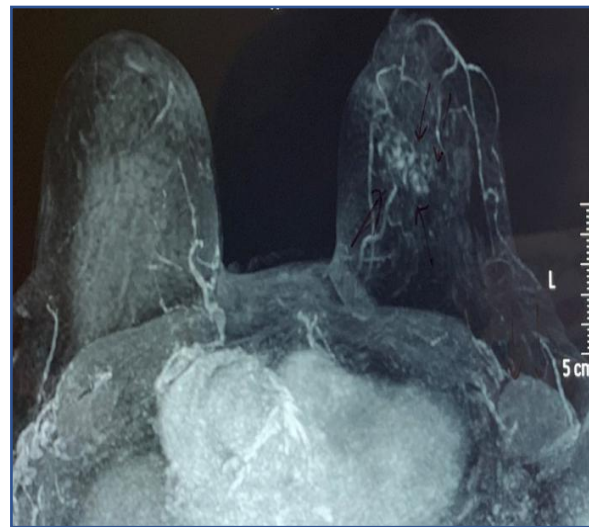


Fig. 4

Fig. 3 & 4: No significant Pathology seen in Right Breast and Axilla

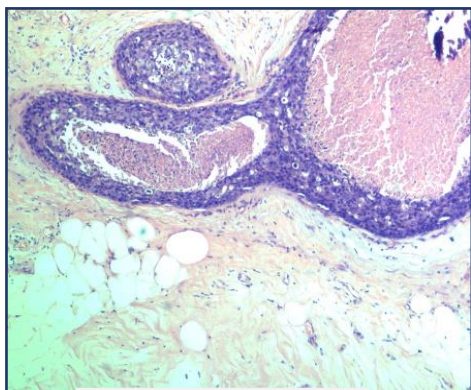


Fig. 5

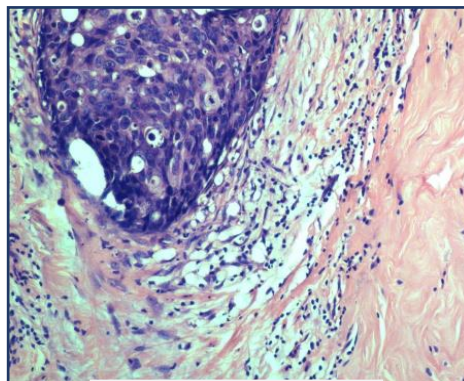


Fig. 6

Fig. 5 & 6: Histology Thyroid Nodules, heterogeneously enhancing as well as hypodense and partly calcified nodules