Breast or Uterus?? An Unusual Cause of Menorrhagia (Case of Metastasis of Breast Cancer to the Endometrium)

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ABSTRACT

Introduction: Cancer screening is available but its utilization is limited. It is important to create awareness amongst the masses to enable the early detection of Cancer.

Case Reort: This is a case of Bilateral Invasive Lobular carcinoma of the breast treated with radical mastectomy, she was given Tamoxifen followed by Anastrazole. Later the patient presented with abnormal uterine bleeding for which curettage was done to rule out Tamoxifen-associated lesions. Histopathology of the endometrial tissue showed metastasis of lobular carcinoma of breast. It is a rare presentation which has been treated aggressively and patient has responded well.

Conclusion: High index of suspicion and vigilance is need to pick up metastatic disease in Tamoxifen treated breast cancer.

Keywords: Breast, Carcinoma, endometrium, Hyperplasia, Metastatic. Menorrhagia, Tamoxifen

INTRODUCTION

Cancer is an important health issue worldwide with Breast and cervical cancer leading in the list.[1] Cancer screening is available in almost all the hospitals but its utilization by the masses is limited. The case described here is a challenging case where diagnosis was made because of high index of suspicion and after multimodal therapy patient presently is doing well.

CASE REPORT

Mrs. ABC 38 year old presented to Nair hospital 3 years back with complaints of menorrhagia. She had undergone Lumpectomy followed by modified radical mastectomy of left breast for Invasive lobular carcinoma in 2005, 2 out of 13 lymph nodes were positive for metastasis. She was given 6 cycles of chemotherapy followed by 6 weeks of radiation, following which she received Tab. Tamoxifen for 5 years. In 2012 she felt a lump in her right breast for which modified radical mastectomy was done. Histopathology was suggestive of Invasive Lobular carcinoma in situ (Fig 1 & Fig 2) with 8 out of 24 lymph nodes showing evidence of metastasis. Patient was only given 6 cycles of radiation. She was taking Tab. Anastrazole 1mg for the last 2 years as the tumor tested positive for Estrogen and Progesterone receptors. Under the previous circumstances and present symptoms of menorrhagia a Dilatation and curettage was done on 14/06/2013 to rule out Tamoxifen induced endometrial hyperplasia. Histopathology report of the endometrial tissue was suggestive of metastasis of breast carcinoma (favor lobular carcinoma) in endometrium. Patient was referred to Tata Memorial Hospital for further management where her CT scan followed by a PET CT Scan was done. CT scan report was suggestive of a bulky uterus with heterogeneous myometrial enhancement, asymmetrical gall bladder thickening, omental thickening s/o omental deposits, multiple osteomyelitic and sclerotic lesion in bones s/o bone metastasis, bilateral hydronephrosis with multifocal ureteric stricture possibly post radiation status, and mild ascites. PET CT was suggestive of hyper metabolic endometrium, hyper metabolic skeletal and lymph node metastasis. Chemotherapy was advised for 6 cycles with Inj. Paclitaxel 260mg, Inj. Carboplatin 300mg. Patient has completed the cycles of chemotherapy and now receiving Tab Letrozole 2.5 mg/day. PET CT done in February 2014 was suggestive of reduction in the intensity of skeletal lesions, active disease seen in the uterus. Palliative radiotherapy of 5 cycles was given to the whole pelvis in 2014. PET CT was done in 2015 which is suggestive of no metabolically active lesion in chest wall, metabolically active disease noted in the multiple lytic and sclerotic bony lesions in the sternum, bilateral humerii, bilateral femorii, multiple dorsal and lumbar vertebrae. The lesions had not increased over the past year and the patient is comfortable and stable.

DISCUSSION

Breast cancer is the most prevalent type of cancer in women, which is responsible for significant female mortality related to cancer worldwide.[1] Common types of Breast cancer are Ductal carcinoma in situ (carcinoma arising from lactiferous ducts), Invasive ductal carcinoma and invasive Lobular carcinoma (ILC) (carcinoma arising from the lobules). About 1 out of 10 invasive breast cancer cases is an ILC. [2]

Breast cancer metastasizes to many organs, commonly to the bone (most common), lung, liver with uterus being an uncommon site often diagnosed only on autopsy. [3] However mainly intralobular breast cancer is the most common cancer that metastasizes to the uterus.[4]

Metastatic breast cancer cells frequently differ from the preceding primary breast cancer cells in their receptor status. They are resistant to several lines of treatment and have special properties which permit them to metastasize to distant organs.[5] Around 80% of breast cancers are hormone (Estrogen & Progesterone) receptor positive which are treated with selective estrogen receptor modulators (SERM) like Tamoxifen, and Aromatase Inhibitors (AIs) like Anastrazole, Letrozole, Exemestane.[6]

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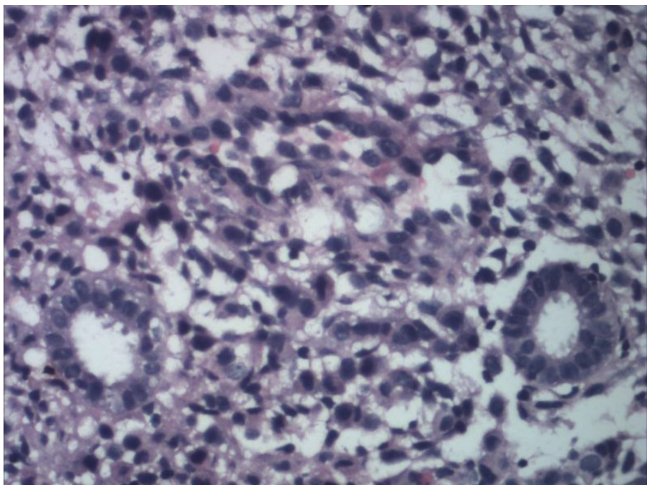

Figure-1: Slide shows intermediate sized tumor cells with small nucleus and moderate eosinophilic cytoplasm. Occasional tumor cells show intracytoplasmic vacuoles.

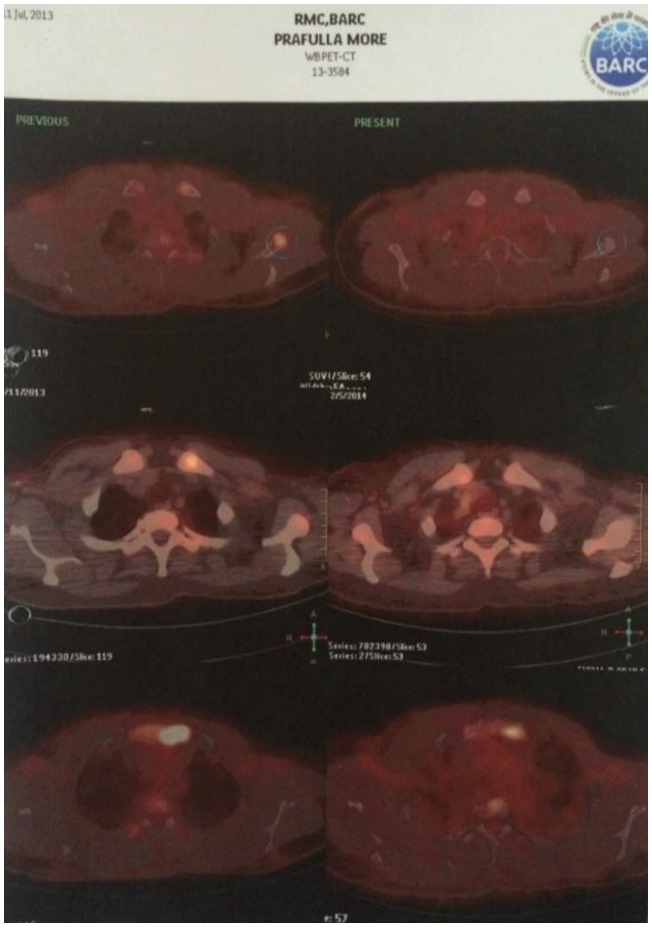

Figure-2: Section shows endometrial glands and presence of tumor cells arranged in Indian file pattern in the surrounding stroma (H & E, 400X)

Tamoxifen is a nonsteroidal triphenylethyl compound. It is widely used as an adjuvant therapy in treatment of breast cancer due to its anti- estrogenic property on the Breast tissue. It is known to prolong overall disease free survival, reduce the chances of disease in contralateral breast, and reduce the risk of breast cancer in women with a very strong family history. [7] Tamoxifen also has a weak estrogenic effect on the endometrium resulting in endometrial proliferative lesions, including simple, complex, and atypical hyperplasia; polyps (single or multiple); cancerous polypoidal growths and adenocarcinoma. [8,9] Presentation is mostly abnormal uterine bleeding. Primary endometrial carcinoma or Metastatic endometrial carcinoma also presents with abnormal uterine bleeding, thus making it difficult to diagnose whether the malignancy is primary due to Tamoxifen or metastatic. [10]

(In the present case, Tamoxifen had been used as an adjuvant hormonal therapy for 5 years but was not in use when she developed this symptom.)

The challenges in this case were making the right diagnosis, and selecting appropriate therapy for the aggressive disease. So far, even after 3 years of such an advanced diagnosis and treatment the patient is stable and doing well with regular follow up!

CONCLUSION

High index of suspicion and vigilance is needed to pick up metastatic disease in Tamoxifen treated breast cancer. Even though the diagnosis of advanced cancer is made aggressive therapy can give good disease free survival.

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