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Management of Endocrine-Resistant, Recurrent Metastatic Hormone Receptor-Positive Breast Cancer: A Case Report

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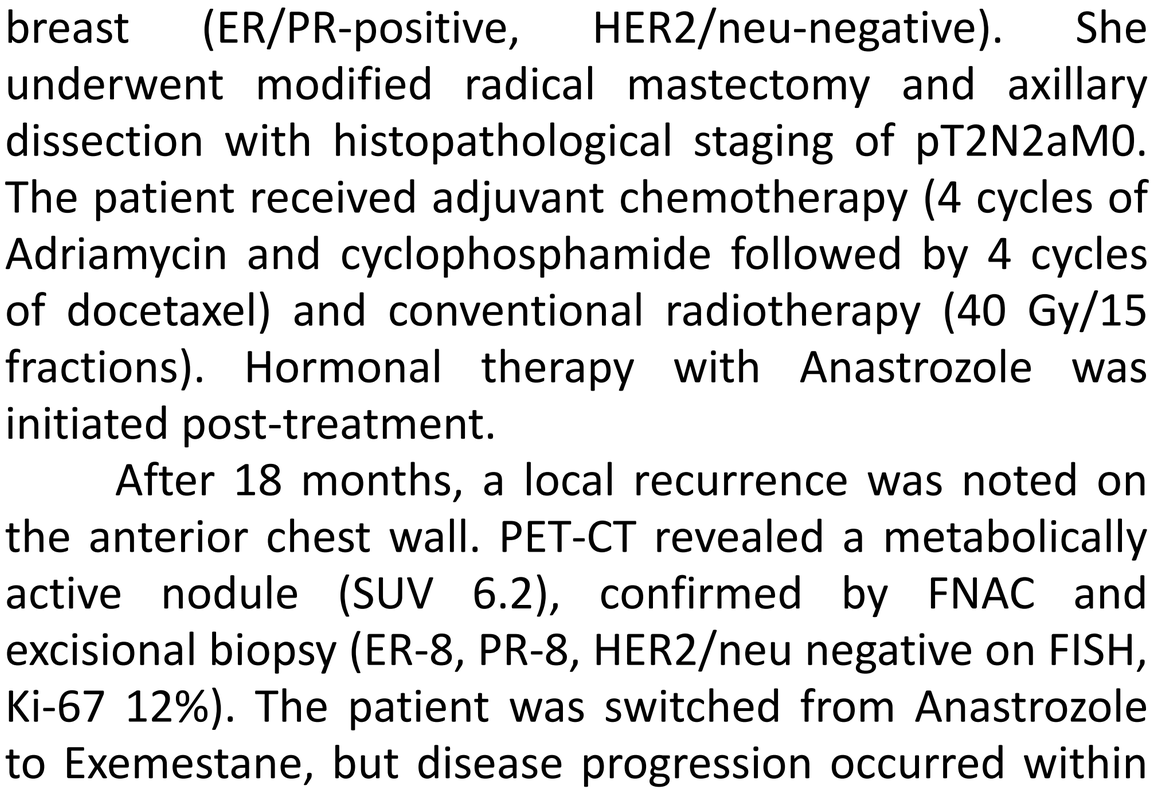
INTRODUCTION & AIM

Hormone receptor-positive (HR+) breast cancer presents a significant therapeutic challenge, particularly when endocrine resistance emerges. The aim of this case report is to discuss the management of a 64-year-old woman with recurrent, metastatic HR+ breast cancer, highlighting the critical role of systemic chemotherapy after the failure of endocrine therapy.

CASE PRESENTATION

A 64-year-old female, with no significant comorbidities, was diagnosed with carcinoma of the left breast (ER/PR-positive, HER2/neu-negative). She underwent modified radical mastectomy and axillary dissection with histopathological staging of pT2N2aM0. The patient received adjuvant chemotherapy (4 cycles of Adriamycin and cyclophosphamide followed by 4 cycles of docetaxel) and conventional radiotherapy (40 Gy/15 fractions). Hormonal therapy with Anastrozole was initiated post-treatment.

After 18 months, a local recurrence was noted on the anterior chest wall. PET-CT revealed a metabolically active nodule (SUV 6.2), confirmed by FNAC and excisional biopsy (ER-8, PR-8, HER2/neu negative on FISH, Ki-67 12%). The patient was switched from Anastrozole to Exemestane, but disease progression occurred within a year, suggesting endocrine resistance.

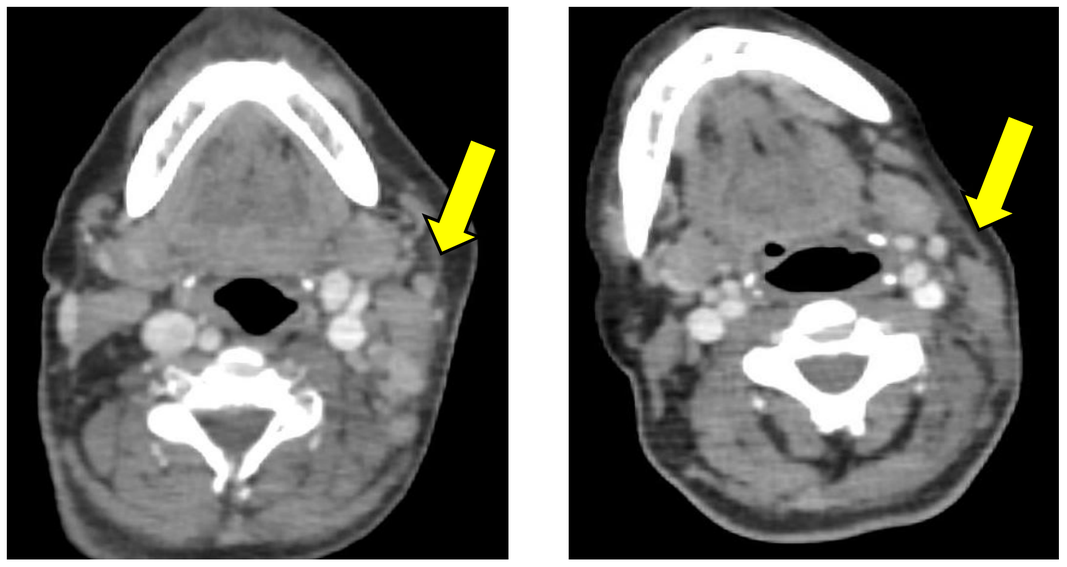


A) ER-positive **B) PR-positive**

Fig 1. IHC showing hormone receptor staining.

Fifteen months later, PET-CT showed metabolically active cervical, axillary, and mediastinal lymph nodes (**Fig. 2A**), and a supraclavicular lymph node biopsy confirmed metastatic carcinoma (ER-8, PR-2%, HER2/neu negative on FISH, Ki-67 20%). Next, the patient received chemotherapy with Gemcitabine plus Carboplatin; however, clinical progression with increasing lymph node size was observed after 2 cycles.

Eribulin is an antimicrotubule agent that destroys rapidly dividing cells. Therefore, we decided to switch the patient to treatment with eribulin (day 1, day 8 regimen). After completing 6 cycles, PET-CT showed complete metabolic response (CMR) with a resolution of previous lesions (**Fig. 2B**).



A) Before **B) After 6 cycles**

Fig 2. PET CT scan showing disease patterns

DISCUSSION & CONCLUSION

The patient tolerated Eribulin well, with minimal side effects, and continues maintenance therapy. This case highlights the complexity of treating endocrine-refractory HR+ metastatic breast cancer, particularly in the context of progression with prior chemotherapy. The success of Eribulin in achieving CMR highlights its effectiveness as a treatment option in heavily pretreated patients. Implementing tailored therapeutic strategies in this type of cases remains essential for the treatment of advanced HR+ breast cancer.

FUTURE DIRECTIONS

Understanding resistance mechanisms and evaluating long-term outcomes will help optimize personalized treatment approaches for endocrine-refractory HR+ metastatic breast cancer.