

'ORPHAN'ED IN THE BREAST

A Case of Occult Metastasis from Papillary thyroid Carcinoma



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Abstract

- Papillary thyroid carcinoma (PTC) is usually indolent with good prognosis and long term survival. However, PTC distant metastasis is often a grave event and accounts for most of its disease-specific mortality
- Major sites of distant metastasis are lung and bone. Metastases to BREAST, brain, liver, kidney, muscle, and skin are rare.
- We report here a rare case of PTC which had an occult metastasis to breast picked up with radio iodine scan and confirmed with subsequent investigations.

Case

- 47yr old lady
- Treated in Feb 2014 for papillary carcinoma thyroid with surgery and radio-iodine ablation.
- Post I-131 therapy whole body scintigraphy was done which showed significant I-131 uptake in residual thyroid tissue and focal abnormal increase I-131 tracer uptake in right lower chest.
- Mammogram was done
- Mammogram and USG detected an ill defined lesion less than 1cm in right breast.
- No co-morbidities

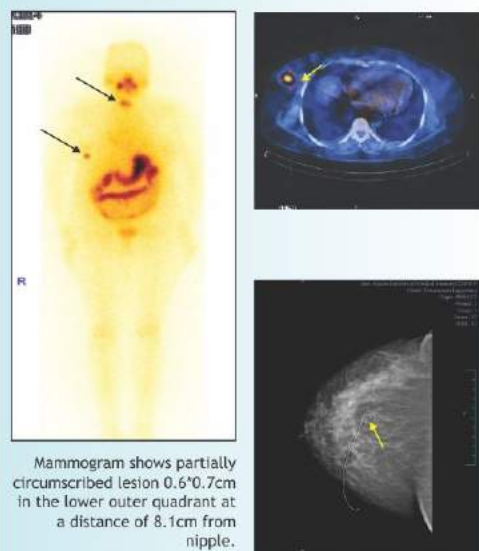
PERSONAL HISTORY:

- Pre-menopausal, multiparous with 2FTCS, breast fed for 3yrs.

O/E:

- Right breast shows some nodularity in lower outer quadrant around 7'o clock position, about 1 finger breath away from alveolar margin.
- no other lumps felt.
- no axillary lymph nodes.
- Opp breast, axilla: NAD; no scl nodes.

Significant I-131 uptake in residual thyroid tissue. Focal abnormal increased I-131 tracer uptake in right lower chest.

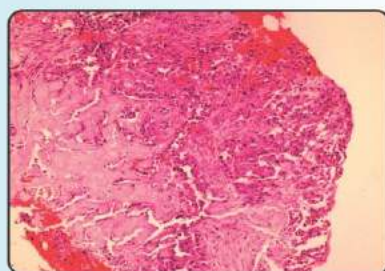


Mammogram shows partially circumscribed lesion 0.6*0.7cm in the lower outer quadrant at a distance of 8.1cm from nipple.

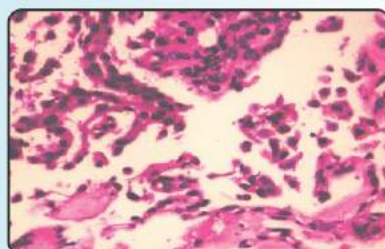
Cores of breast tissue with a neoplasm composed of cells in cribriform pattern and occasional glands



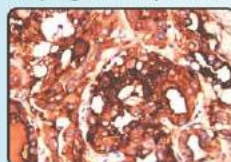
Glandular pattern



Nucleus is round with few of them showing nuclear inclusions



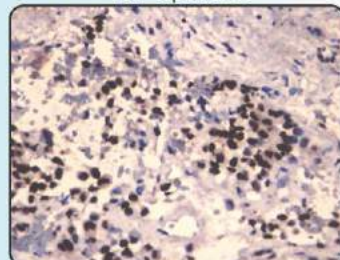
Thyroglobulin-positive



CK7-positive



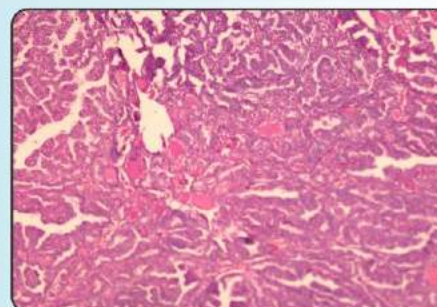
TTF-1:positive



Final Diagnosis

- INVASIVE CARCINOMA OF BREAST;
- CORRELATING WITH IHC FINDINGS, METASTASIS FROM PRIMARY PAPILLARY THYROID CARCINOMA IN A KNOWN CASE,

Papillary carcinoma of thyroid (Previous Thyroidectomy)



Discussion

- Papillary and follicular carcinomas of the thyroid are often together referred to as differentiated thyroid carcinoma (DTC)
- Papillary carcinoma, which ordinarily behaves in an indolent manner, can have unusual metastatic presentations.
- Metastasis to the breast from DTC is extremely rare.

- To date, only 11 cases have been described in the literature

IN WHICH

- All of the patients were females
- Four papillary carcinoma
- Three follicular carcinoma
- Metastatic disease to the breast tends to be superficial and usually located at the upper outer quadrant
- Metastases to the breast are associated with poor prognosis

Follow up

- Patient orally ablated with 2516MBq of I-131
- To be followed up after 6 months with wholebody I-131 scan and serum thyroglobulin, TgAb estimation after 6 months
- Being single metastasis in breast, curative wide local excision was done

Gross - WLE Breast



Conclusion

- With the popularity of I-131 treatment and the emergence of I-131-SPECT/CT fusion imaging techniques, metastasis may not be as rare as once we thought.
- Care should be taken to determine whether I-131 uptake found at an unexpected site is DTC metastasis or false-positive uptake
- Immunohistochemistry plays an important role in identification of metastatic lesions
- Increasing importance should be given to rare metastasis in DTC patients.

References

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Acknowledgement

- DR. P. Shanmuga Sundaram, Dept of Nuclear medicine
- Dr. D. K. Vijayakumar, Dept of Surgical Oncology
- Dr. Janaki, Dept of Radio Diagnosis

