

Letter to the editor

Metastatic breast carcinoma masquerading as a lymphoma

S. Selvaraj, G. Champaka

Kidwai Memorial Institute of Oncology, Bengaluru, Karnataka, India

A 55-year-old woman presented with enlarged right cervical and axillary lymph nodes and was clinically suspected to have lymphoma. At presentation, she had B - symptoms including on and off fever, loss of appetite and weight loss of 8 kg over two months. The lymph nodes had gradually increased in size. On examination, she had a 3x2cm, firm, non-tender, fixed, level IV cervical lymph node, and a 3x3 cm, firm, non-tender, mobile axillary lymph node. Systemic examination revealed no other significant clinical findings. Fine needle aspiration of the cervical lymph node showed reactive lymphoid hyperplasia. As there was a strong clinical suspicion of lymphoma, an excision biopsy of a cervical lymph node was performed for histopathological evaluation.

The specimen consisted of a single lymph node measuring 3x2x1 cm with an intact capsule. The cut section was grey white and firm with no evidence of necrosis. Microscopy revealed a lymph node with an intact capsule and preserved nodal architecture. On higher magnification, the follicles and parafollicular areas showed scattered, large atypical mononuclear Hodgkin-like cells with vesicular nuclei, prominent nucleoli, and moderate eosinophilic cytoplasm. Some large cells showed binucleation. Mitoses were prominent

with a few atypical forms. However, there were no classical Hodgkin cells, and the background did not have the microenvironment suggestive of Hodgkin lymphoma. A T-cell lymphoma was favoured on morphology.

The initial panel of immunohistochemistry markers revealed positivity for EMA in the large, atypical cells and negativity for CD30, CD15, ALK, CD5, CD2, CD7, PAX5, and LMP-1. CD20 and PAX5 highlighted the follicles with reactive B cells and CD3 highlighted the reactive T cells. CD23 highlighted the follicular dendritic cell network.

These morphological and immunohistochemical features raised the possibility of metastatic carcinoma. Subsequent immunostains showed GATA3 positivity in the large, atypical cells. Although a percentage of Hodgkin lymphoma can be positive for EMA and GATA3, the other markers did not support this diagnosis. Further immunohistochemical analysis revealed positivity for CK7, mammaglobin, ER and PR. The cells were negative for CK20 and HER2. Based on these immunomorphological features, a final diagnosis of hormone-positive, HER2 negative metastatic breast carcinoma was made.

Further clinical evaluation with mammography and ultrasound scan revealed an occult, 5x3mm, BIRADS V lesion in the upper outer quadrant of the right breast. A biopsy of the

Corresponding author: Dr Sivaranjani Selvarajah
Kidwai Memorial Institute of Oncology
Bengaluru, Karnataka
India

Email: sivaranjani0892@gmail.com



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mass confirmed an invasive breast carcinoma of no special type, Nottingham grade 2. On immunohistochemistry, these tumour cells were positive for ER, PR, and HER2. The Ki-67 proliferation index was 15%.

Occult primary breast carcinomas constitute about 0.1 to 1% of all breast carcinomas (1). The prognosis of these tumours is debatable with the 10-year overall survival ranging from 45% to nearly 70% (2-5).

In conclusion, we would like to highlight the importance of considering the possibility of a metastatic carcinoma when dealing with a possible lymphoma exhibiting atypical morphological and immunohistochemical features. The judicious use of immunohistochemical markers can aid in the diagnosis.

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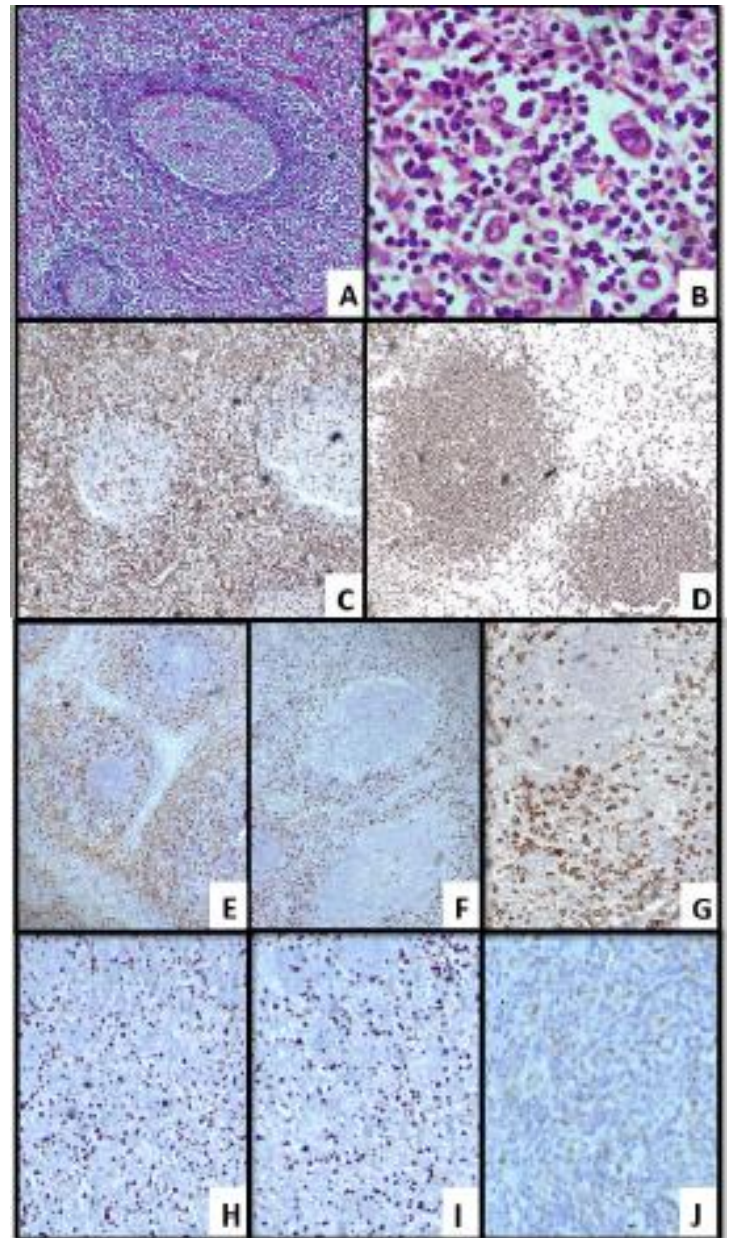


Figure 1: The microscopic appearance of the lymph node

A. Cervical lymph node biopsy with expanded germinal centres and prominent mantle zone. The follicles and parafollicular area were infiltrated by large, atypical cells (H&E x100). **B.** Large atypical mononuclear and binucleate cells in a background of reactive lymphoid cells (H&E x400). **C.** CD3 highlighted the reactive T cells (x100). **D.** CD20 highlighted the B cells in the reactive follicles (x100). The tumour cells were positive for: **E.** EMA (x100) **F.** GATA3 x100 **G.** Mammaglobin (x200) **H.** ER (x200) **I.** PR (x200). **J.** The cells were negative for HER2 (x400)