Diffuse Large B Cell Lymphoma with Pseudoacinar Arrangement: A Potential Diagnostic Pitfall

Vani Bharani¹ · Sreejesh Sreedharanunni¹ · Pankaj Malhotra² · Neelam Varma¹

Received: 11 January 2018 / Accepted: 3 April 2018 / Published online: 6 April 2018
© Indian Society of Hematology and Blood Transfusion 2018

A 62-year male presented with fever, weight loss and shortness of breath of 2 months duration. He had pallor, hepatosplenomegaly; anemia and thrombocytopenia. Bone marrow smears showed clusters of large pleomorphic atypical cells with frequent acinar arrangement and abundant vacuolated cytoplasm (Fig. 1a–d). No lymphoglandular (LG) bodies were seen, raising the suspicion of metastatic carcinoma. Biopsy showed sheets and interstitial excess of atypical cells with interspersed normal hematopoietic elements (Fig. 2a, b). Immunohistochemistry for Pan cytokeratin was negative, ruling out a carcinoma. Strong membranous positivity for CD45 and CD20 (Fig. 2c–e) was seen, while CD3, CD5, CD23, CD10,

CD30, and cyclin D1 were negative. Together with diffuse nuclear MUM-1 positivity ($\geq 30\%$) and CD10 negativity ($< 30\%$), a diagnosis of diffuse large B cell lymphoma (DLBCL), non-germinal center B-cell subtype was offered as per Hans-algorithm [1]. Patient succumbed to heart failure. In view of the absence of lymphadenopathy and any mass lesion on examination and imaging, the patient is likely to have primary bone marrow DLBCL.

Pleomorphic lymphomas especially anaplastic large cell lymphomas are known to mimic carcinoma; however, the phenomenon is distinctly rare in DLBCL [2]. The odd features in this case were pseudoacinar arrangement and lack of LG bodies. Liberal use of

✉ Sreejesh Sreedharanunni
sreejesh.s@pgimer.edu.in; dr.s.sreejesh@gmail.com

Vani Bharani
vanibharani@gmail.com

Pankaj Malhotra
malhotrapankaj@hotmail.com

Neelam Varma
varmaneelam@yahoo.com

¹ Department of Hematology, Postgraduate Institute of Medical Education and Research, 5th Floor, Research Block A, Chandigarh 160 012, India

² Department of Internal Medicine, Postgraduate Institute of Medical Education and Research, Chandigarh, India

Fig. 1 Bone marrow aspirate smear shows many cohesive clusters of large pleomorphic cells (**a**; $\times 10$) arranged in pseudoacinar pattern (**b–d**; $\times 20$) (May Grunwald Giemsa stain)

Fig. 2 Bone marrow trephine biopsy shows diffuse infiltration by large pleomorphic cells (**a, b**; hematoxylin and eosin; $\times 20$), which are positive for CD45 (**c**), CD20 (**d**) and MUM-1 (**e**)

ancillary techniques is essential before offering a diagnosis in such cases.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.

Informed Consent Informed consent was obtained for the bone marrow procedure. The patient is deceased. No patient identifying information is presented in the report.

References

1. Hans CP, Weisenburger DD, Greiner TC, Gascoyne RD, Delabie J, Ott G et al (2004) Confirmation of the molecular classification of diffuse large B cell lymphoma by immunohistochemistry using a tissue microarray. *Blood* 103:275–282
2. Mok Y, Goh GH, Wang S (2017) Unusual cohesive growth pattern of diffuse large B cell lymphoma mimicking metastatic carcinoma. *Br J Haematol* 176:850