

Diffuse large B cell lymphoma presenting with cardiac tamponade in a patient with retroviral disease

Chee Yik Chang¹, Jie Ling Lee¹ and Edmund L.C. Ong^{1,2,*}

¹Medical Department, Hospital Sungai Buloh, Selangor, Malaysia

²University of Newcastle Medical School, Newcastle upon Tyne, UK

*Correspondence address: Newcastle University, Newcastle Upon Tyne, UK. Tel: +447780359865; E-mail: e.l.c.ong@ncl.ac.uk

A 36-year-old man with human immunodeficiency virus (HIV) presented with cough for 1 month associated with breathlessness and orthopnea for 2 weeks. Antiretroviral drugs tenofovir-emtricitabine and efavirenz was initiated four months previously. His most recent CD4 count was 153 cells/mm³ (normal range, 358–1279 cells/mm³) and his HIV viral load was not detected.

Chest radiograph revealed massive right pleural effusion and bedside echocardiography revealed severe pericardial effusion with cardiac tamponade, necessitating emergency pericardiocentesis. Pleural and pericardial fluid examinations were negative for infection or malignancy. Computed tomography (CT) of the thorax revealed a heterogeneously-enhancing soft tissue mass measuring 10.4 × 12.2 cm, involving the mediastinum and right hilum (Fig. 1a). Percutaneous CT-guided biopsy of the lesion showed large atypical lymphoid cells containing hyperchromatic and pleomorphic nuclei (Fig. 1b). Immunohistochemical staining revealed that the tumour cells expressed CD45, CD20, CD10 and BCL6, but not

CD3 or MUM1. These findings supported the diagnosis of germinal center type diffuse large B cell lymphoma (DLBCL).

Cardiac tamponade is a rare initial clinical manifestation of diffuse large B-cell lymphoma. This non-Hodgkin lymphoma is more frequently described in patients with HIV presenting with lymphadenopathy and/or multi-organ involvement. The pathogenesis of HIV-associated lymphoma involves a complex interplay of biologic factors, such as chronic antigen stimulation, genetic abnormalities, coinfection with oncogenic viruses and cytokine dysregulation [1]. Since the introduction of highly active antiretroviral therapy, the incidence of lymphoma in patients with HIV has decreased significantly [2]. Although pleural effusion occurs in 20%–30% of these cases, pericardial involvement is uncommon, as demonstrated in this case [3]. Clinicians must have a high index of clinical suspicion for lymphoma in such susceptible patients who present with pleural and pericardial effusion.

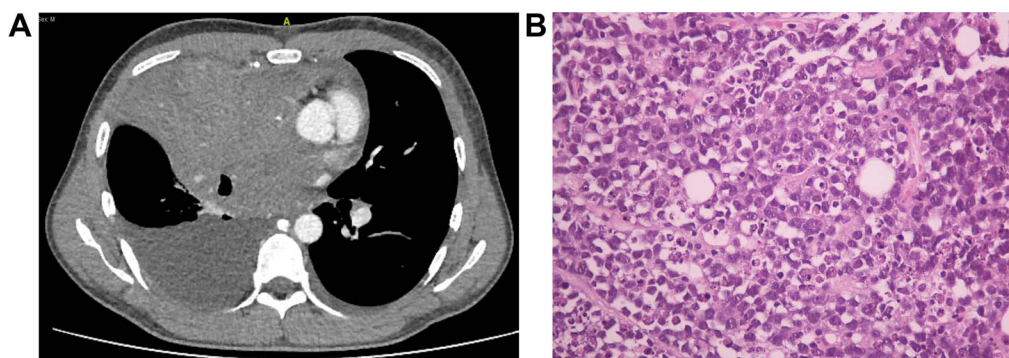


Figure 1. (a) Contrast-enhanced CT of the thorax revealed a heterogeneously-enhancing soft tissue mass involving the mediastinum and right hilum, and right pleural effusion. (b) Histopathological examination of the mediastinal/right hilar mass showed the presence of large atypical lymphoid cells, containing hyperchromatic and pleomorphic nuclei.

Received: March 11, 2022. Accepted: April 20, 2022

© The Author(s) 2022. Published by Oxford University Press. All rights reserved. For Permissions, please email: journals.permissions@oup.com

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. For commercial re-use, please contact journals.permissions@oup.com

ACKNOWLEDGEMENTS

Not applicable.

CONFLICT OF INTEREST STATEMENT

None declared.

FUNDING

No funding was received for this study.

ETHICAL APPROVAL

Not required.

CONSENT

Written informed consent was obtained from the patient.

GUARANTOR

Edmund LC Ong is the guarantor.

REFERENCES

1. Dunleavy K, Wilson WH. How I treat HIV-associated lymphoma. *Blood* 2012;**119**:3245–55.
2. Re A, Cattaneo C, Rossi G. Hiv and lymphoma: from epidemiology to clinical management. *Mediterr J Hematol Infect Dis* 2019;**11**:e2019004.
3. Das DK. Serous effusions in malignant lymphomas: a review. *Diagn Cytopathol* 2006;**34**:335–47.