Multimodality assessment of an intracardiac mass

Dhirendra Kumar T. Tiwari*, Sadia Khan, Jean Matthew, Mona Hammad, Adnan Ahmed

European Journal of Medical Case Reports
Volume 10(12):558–559
DOI: 10.24911/ejmcr.9-3068

OPEN ACCESS

This is an open access article distributed in accordance with the Creative Commons Attribution (CC BY 4.0) license: https://creativecommons.org/licenses/by/4.0/) which permits any use, Share — copy and redistribute the material in any medium or format, Adapt — remix, transform, and build upon the material for any purpose, as long as the authors and the original source are properly cited. © The Author(s) 2026

Type of Article: Image **Specialty:** Cardiology

Correspondence to: Dhirendra Kumar T. Tiwari
* Department of cardiology, Royal Preston Hospital, Fulwood, Preston PR2 9HT, United Kingdom.
Email: tiwaridhirendra1986@gmail.com
Full list of author information is available at the end of the article.

Received: 03 August 2026
Revised (1): 26 September 2026
Accepted: 03 October 2026

Introduction

A male in 50s had presented with gradually progressive symptoms of superior vena cava (SVC) syndrome in the form of facial and upper limbs swelling for 3 months. He had right sided pleural effusion and wide upper mediastinum on chest Xray (Supplementary image 1). An echocardiogram showed a large echogenic structure almost filling right artium, extending to superior vena cava (Panel A, Supplementary video 1). A CT chest confirmed presence of the mass, nearly occupying entire intra-atrial space with extension into and obliterating superior vena cava (Panel B, Supplementary video 2), along with mediastinal lymphadenopathy. CT-guided biopsy of mediastinal lymph node did not yield enough tissue to confirm the diagnosis. A PET scan confirmed right atrial mass with very high FDG uptake with an standardized uptake value (SUV) max of 25 (Panel C), along with few superficial right supraclavicular lymph nodes (Panel D). Subsequently, patient underwent surgical biopsy of this right supraclavicular lymph node. Histopathology with immunohistochemistry results came back as BCL-2 + BCL-6+ CD10− CD20+ CD23− CD3− CD3+ CD5− CD79+ CyclinD1− IRF4+ Ki6770% post germinal center B cell phenotype - diffuse large B cell lymphoma (DLBCL). His clinical staging was IV B (cardiac involvement). Lymphoma presenting as intracardiac mass is rare, thus presents a diagnostic challenge, adding to this is an inaccessible location of the mass. The most common lymphoma to have cardiac involvement is DLBCL [1]. Patient was started on urgent POLA-R-CHP chemotherapy and responded well. He has had three cycles of the same at the time of writing this report. His repeat CT scan at mid treatment showed a significant reduction in the size of the right atrial mass (supplementary video 3). The plan is to finish six cycles of POLA-R-CHP regimen and perform an end of treatment PET scan. Steroid was continued as part of chemotherapy. This case emphasizes the importance of multimodality assessment of an intracardiac mass along with involvement of a multidisciplinary team.

Supplementary image 1: Xray chest showing right-sided pleural effusion

Supplementary video 1: Apical four chamber view showing large echogenic mass in left atrium: https://www.youtube.com/watch?v=y-ALm4--Llc

Supplementary video 2: CT scan showing extent of mass from superior vena cava to right atrium: https://www.youtube.com/watch?v=j3wGNXPcQ4o

Supplementary video 3: CT repeated at the end of three cycles showing significant reduction in tumor size in right atrium and SVC: https://www.youtube.com/watch?v=hizuxP-csAU

Conflict of interest

None declared.

Funding

No funding was received for the preparation of this case report.

Consent for publication

Consent obtained directly from patient.

Ethics approval and consent to participate

Not applicable.

Data availability statement

No new data were generated or analyzed in support of this research.

Author details

Dhirendra Kumar T. Tiwari, Sadia Khan, Jean Matthew, Mona Hammad, Adnan Ahmed

1. Department of Cardiology, Royal Preston Hospital, Preston, United Kingdom

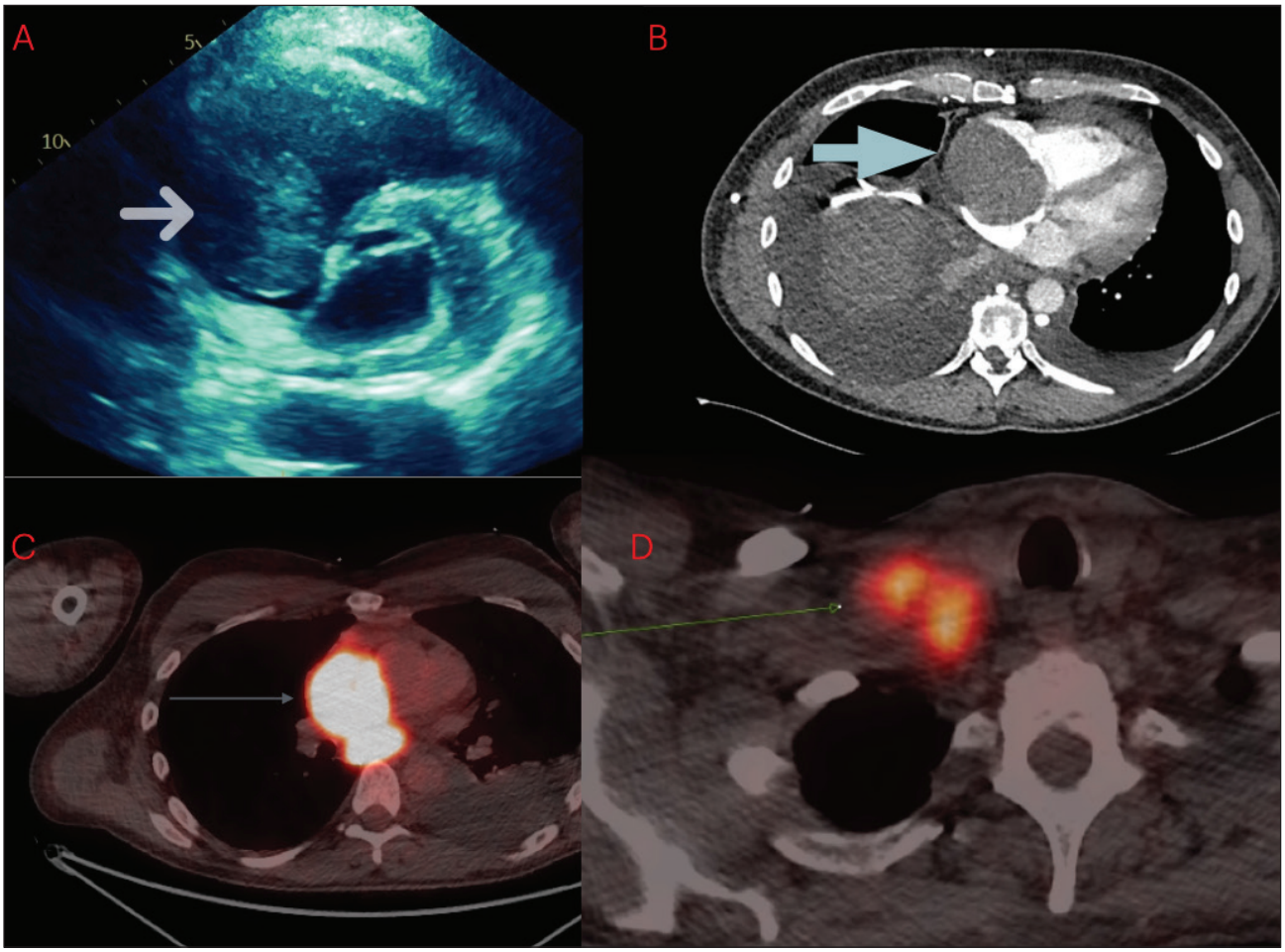


Figure 1. *Panel A: Echocardiogram at high short-axis view showing large echogenic mass filling right atrial cavity: Panel B: A CT chest image showing the large right atrial lesion measuring 7 cm, occupying nearly the entire atrial space; Panel C: Shows right atrial mass with very high FDG uptake with an SUV max of 25; Panel D: Discrete lymph nodes showing very high uptake at the right supraclavicular fossa*

List of Abbreviations

CT	Computed Tomography scan
FDG	Fluorodeoxyglucose
PET	Positron Emission Tomography

References

1. Nasir A, Patel YB. Diffuse Large B-cell Lymphoma Presenting as a Cardiac Mass. Cureus. 2024. 16(5):e59755. https://doi.org/10.7759/cureus.59755