

Multimodality assessment of an intracardiac mass

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15 Introduction

16 A male in 50s had presented with gradually progressive
17 symptoms of superior vena cava (SVC) syndrome in the
18 form of facial and upper limbs swelling for 3 months. He
19 had right sided pleural effusion and wide upper mediasti-
20 num on chest Xray (Supplementary image 1). An echocar-
21 diogram showed a large echogenic structure almost filling
22 right artium, extending to superior vena cava (Panel A,
23 Supplementary video 1). A CT chest confirmed presence
24 of the mass, nearly occupying entire intra-atrial space with
25 extension into and obliterating superior vena cava (Panel
26 B, Supplementary video 2), along with mediastinal lym-
27 phadenopathy. CT-guided biopsy of mediastinal lymph
28 node did not yield enough tissue to confirm the diagnosis.
29 A PET scan confirmed right atrial mass with very high
30 FDG uptake with an standardized uptake value (SUV)
31 max of 25 (Panel C), along with few superficial right supr-
32 aclavicular lymph nodes (Panel D). Subsequently, patient
33 underwent surgical biopsy of this right supraclavicular
34 lymph node. Histopathology with immunohistochemistry
35 results came back as BCL-2 + BCL-6+ CD10- CD20+
36 CD23- CD3- CD3+ CD5- CD79+ CyclinD1- IRF4+
37 Ki6770% post germinal center B cell phenotype - diffuse
38 large B cell lymphoma (DLBCL). His clinical staging
39 was IV B (cardiac involvement). Lymphoma presenting
40 as intracardiac mass is rare, thus presents a diagnostic
41 challenge, adding to this is an inaccessible location of
42 the mass. The most common lymphoma to have cardiac
43 involvement is DLBCL [1]. Patient was started on urgent
44 POLA-R-CHP chemotherapy and responded well. He
45 has had three cycles of the same at the time of writing
46 this report. His repeat CT scan at mid treatment showed
47 a significant reduction in the size of the right atrial mass
48 (supplementary video 3). The plan is to finish six cycles of
49 POLA-R-CHP regimen and perform an end of treatment

PET scan. Steroid was continued as part of chemotherapy.	50
This case emphasizes the importance of multimodality	51
assessment of an intracardiac mass along with involve-	52
ment of a multidisciplinary team.	53
Supplementary image 1: Xray chest showing right-sided	54
pleural effusion	55
Supplementary video 1: Apical four chamber view show-	56
ing large echogenic mass in left atrium: https://www.	57
youtube.com/watch?v=y-ALm4--Llc	58
Supplementary video 2: CT scan showing extent of mass	59
from superior vena cava to right atrium: https://www.	60
youtube.com/watch?v=j3wGNXPcQ4o	61
Supplementary video 3: CT repeated at the end of three	62
cycles showing significant reduction in tumor size	63
in right atrium and SVC: https://www.youtube.com/	64
watch?v=hizuxP-csAU	65

Conflict of interest

None declared.

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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.

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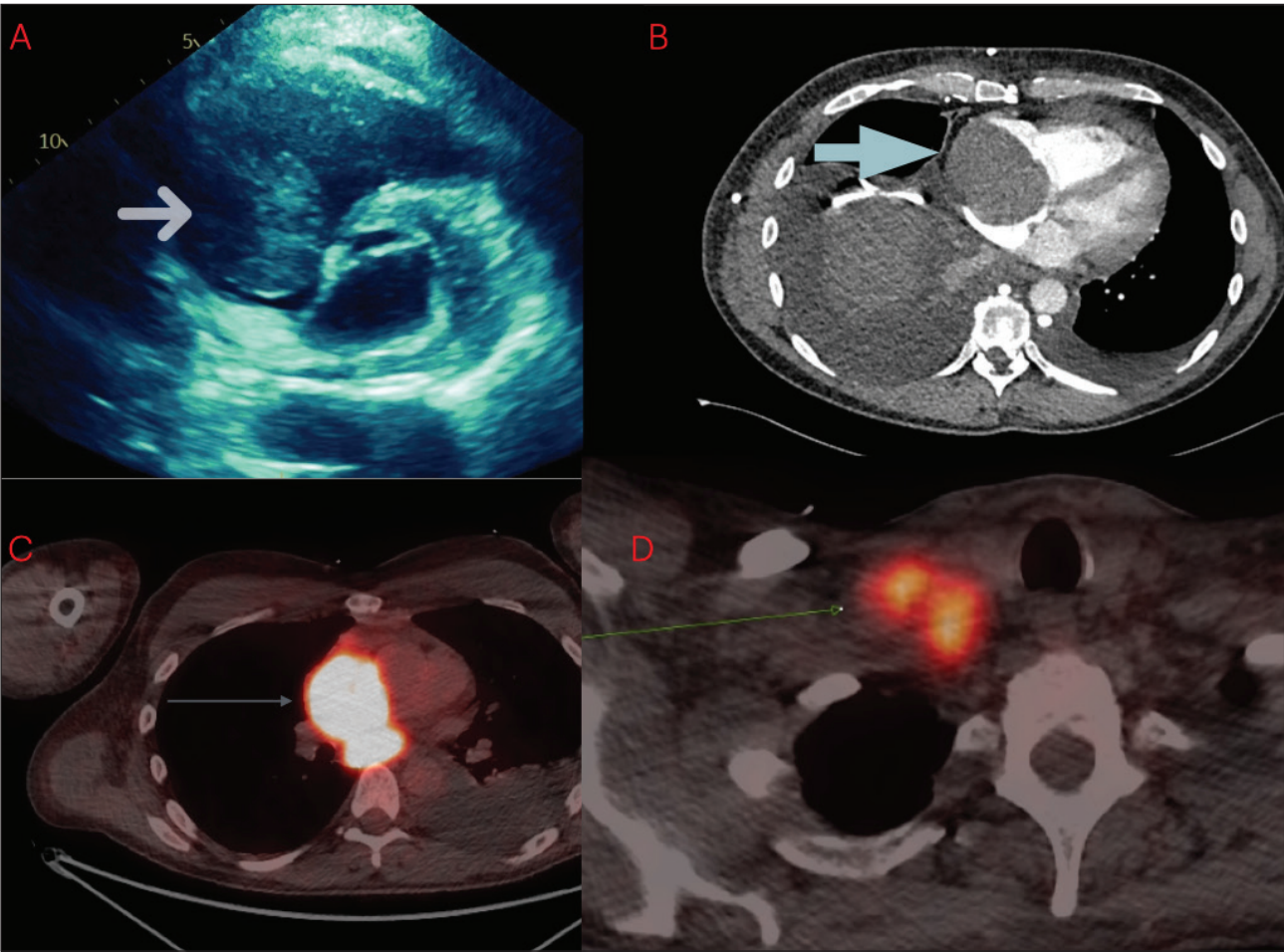


Figure 1. Panel A: Echocardiogram at high short-axis view showing large echogenic mass filling right atrial cavity; Panel B: A CT chest image showing the large right atrial lesion measuring 7 cm, occupying nearly the entire atrial space; Panel C: Shows right atrial mass with very high FDG uptake with 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>