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IMAGE FOCUS



Complete heart block due to extensive leukemic endocardial infiltration

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Metastases remain the most common type of cardiac tumours with an incidence ranging from 2.3 to 18.3% [1]. Clinical presentation is often non-specific and depends largely on the neoplasm's location and its extension, affecting preferentially pericardial and myocardial structures [2–4]. We reported the case of a 60-year old woman who presented to our emergency department with acute asthenia and shortness of breath. The patient had a medical history of T-cell prolymphocytic leukaemia (T-PLL) diagnosed late 2017, treated with alemtuzumab followed by stem cell transplantation and had been considered in complete remission since then. Twelve-lead electrocardiogram at admission showed a third-degree atrioventricular block with junctional escape rhythm at 40 beats per minute. Thoracic

computed tomography (CT) scan documented several highly suspicious pulmonary masses, one intracardiac mass affecting both atria and a circumferential pericardial effusion. We performed a transthoracic echocardiogram that confirmed the presence of an extensive lobed intracardiac mass measuring 40 by 40mm, originating from the interatrial septum and extending towards both atria, affecting the atrioventricular junction (Figure 1). We completed with contrast-enhanced echocardiography using SonoVue (Bracco, Milan, Italy) highlighting partial enhancement of the mass (Figure 2). The patient underwent pericardial drainage. Anatomopathological examination confirmed T-PLL recurrence prompting the immediate initiation of aggressive chemotherapy. The decision to implant a permanent pacemaker was taken

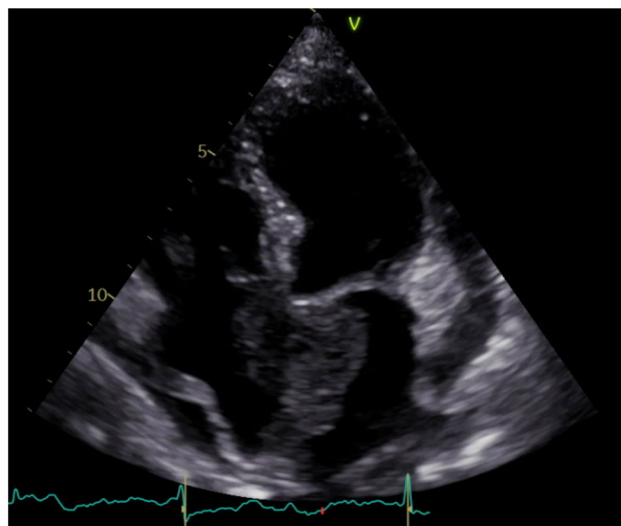


Figure 1. Transthoracic echocardiogram revealing extensive leukemic endocardial infiltration at the atrioventricular junction.



Figure 2. Contrast-enhanced echocardiography highlighting partial enhancement of the mass.

multidisciplinary (including cardiologist, cardiac surgeon, and oncologist) based on the risks and benefits stratification of the patient. The presence of an intracardiac mass in our patient supports the possibility of haematologic spread of leukemic cells into the endocardium, secondarily infiltrating the heart conduction system. Pericardial effusion may represent either metastatic involvement or an inflammatory response to the malignancy. To our knowledge, this is the first reported case of T-PLL resulting in complete heart block.

Disclosure statement

No potential conflict of interest was reported by the author(s).

References

- [1] Bussani R, De-Giorgio F, Abbate A, et al. Cardiac metastases. *J Clin Pathol.* 2007;60(1):27–34. doi:[10.1136/jcp.2005.035105](https://doi.org/10.1136/jcp.2005.035105).
- [2] Tyebally S, Chen D, Bhattacharyya S, et al. Cardiac tumors: *JACC CardioOncology* state-of-the-art review. *JACC CardioOncol.* 2020;2:293–311.
- [3] Maleszewski JJ, Bois MC, Bois JP, et al. Neoplasia and the heart: pathological review of effects with clinical and radiological correlation. *J Am Coll Cardiol.* 2018; 72(2):202–227. doi:[10.1016/j.jacc.2018.05.026](https://doi.org/10.1016/j.jacc.2018.05.026).
- [4] Droogné M, Paelinck B, Troch A, et al. Late overlooked intraluminal right atrial metastasis in endometrial carcinoma. *Acta Cardiol.* 2024;79(1):72–76. doi:[10.1080/00015385.2023.2209442](https://doi.org/10.1080/00015385.2023.2209442).