

IMAGE IN CARDIOLOGY

Trepopnea as a diagnostic clue for malignant disease

Trepopneia como pista diagnóstica para doença maligna

Diana Carvalho*, Adriana Rei Pacheco, Simão Carvalho, Raquel Ferreira, Ana Briosa Neves

Department of Cardiology, Centro Hospitalar Baixo Vouga, Aveiro, Portugal

Received 4 April 2023; accepted 4 June 2023

Available online 21 July 2023



A 62-year-old man with a history of smoking and alcohol consumption went to the emergency room due to a one-week history of coughing and progressively worsening dyspnea (especially when in a left lateral decubitus position), as weight loss over one month.

The echocardiogram (Figure 1A and B) showed a cardiac mass occupying the pericardial cavity and the left atrium (LA), with a maximum diameter of 28 mm. Chest computed tomography (CT) showed a large nodular formation in the LA. The lesion was heterogeneous (96 mm×57 mm), and invading adjacent structures. Cardiac magnetic resonance imaging (Figure 1C and D) revealed a paracardiac mass in the posterior mediastinum, extending from the pulmonary artery (PA) to the diaphragm (91 mm×63 mm×110 mm), infiltrating the LA (27 mm) and the left branch of the PA. It was isointense on T1 and hyperintense on T2.

Positron emission tomography/CT (PET/CT) showed a hypermetabolic mass located in the posterior mediastinum

(Figure 1E and F), no cleavage planes with adjacent structures, which are characteristics of a malignant lesion. Additionally, there was paratracheal, hilar and infraclavicular adenopathy. He underwent a biopsy of the mediastinal lesion, and a diagnosis of diffuse large B-cell lymphoma (Ann Arbor II-A stage) was made.

He began R-CHOP therapy (rituximab, cyclophosphamide, doxorubicin, vincristine, prednisone) with a favorable clinical response.

PET/CT was subsequently repeated, which showed a significant reduction of the mass, and only a small hypodense defect in the atrium. However, the patient became infected with SARS-CoV2 and died four months after starting treatment.

The authors suggest that in this case tumor invasion of the left PA caused a ventilation-perfusion imbalance. This was exacerbated by the left lateral decubitus position, since there is a relative reduction in perfusion of the

* Corresponding author.

E-mail address: diana.carvalho.71530@chbv.min-saude.pt (D. Carvalho).

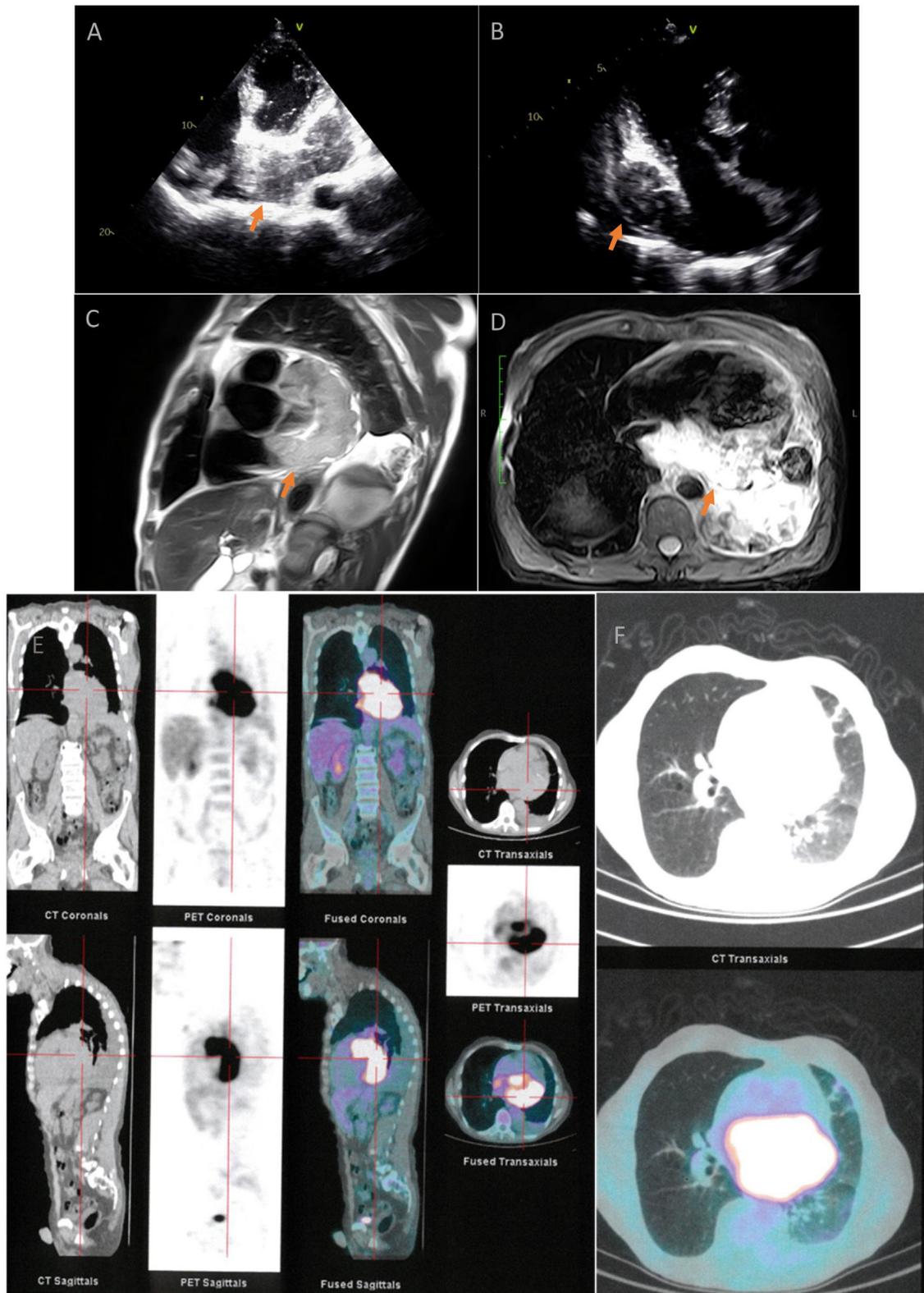


Figure 1 (A) Transthoracic echocardiogram showing cardiac mass involving the left atrium in four-chamber view and (B) in three-chamber view (arrows). (C and D) Cardiac magnetic resonance imaging revealing a posterior mediastinal mass with cardiac infiltration (arrows). (E and F) Positron emission tomography/computed tomography showing a hypermetabolic mass located in the posterior mediastinum.

right PA by gravity. Additionally, left lateral decubitus potentially leads to a partial obstruction of the pulmonary veins, reducing atrial blood inflow and exacerbating pulmonary edema.

Conflicts of interest

The authors have no conflicts of interest to declare.