

Image in cardiology

Imminent Paradoxical Embolism Diagnosed by Computed Tomography



Embolia paradójica inminente diagnosticada por tomografía computarizada

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Figure 1.

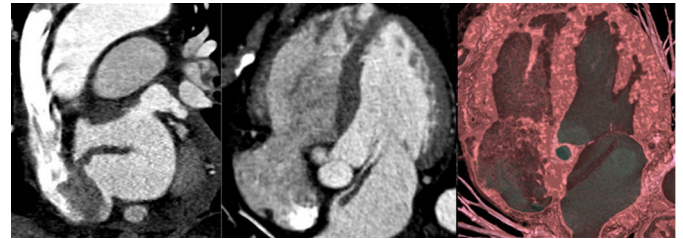


Figure 2.

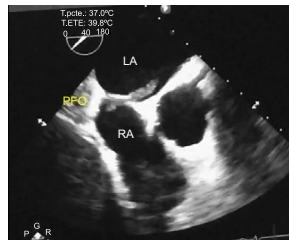


Figure 3.

A 66-year-old male ex-smoker presented with sudden-onset dyspnea and a history of flu-like symptoms and being bed-bound 2 weeks previously, with subsequent improvement.

On examination he was tachypnoeic with oxygen saturation of 90%. D-dimer was 9202 ng/mL, and troponin I was 0.09 ng/mL. Electrocardiogram showed sinus tachycardia at 108 bpm and inverted T waves in V₁-V₄.

Computed tomography (CT) pulmonary angiography was requested, which showed bilateral pulmonary thromboembolism (PRE) with right heart strain (Figure 1). An image was also seen in the LA (left atrium), therefore retrospective ECG-gated cardiac CT and transesophageal echocardiography were performed.

These showed a thrombus anchored between the atria, in a patent foramen ovale (PFO) (Figure 2 and Figure 3; LA, RA [right atrium]), indicative of a thrombus in transit caught in the PFO, with the threat of imminent paradoxical embolus (Supplementary material video).

In light of these findings, the patient was given low-molecular weight heparin and acenocumarol, and urgent cardiac surgery was performed to remove the thrombus and repair the PFO, with no perioperative complications.

The incidence of floating thrombi in the right heart in patients with massive PTE is between 4% and 18%. A PFO is present in 30% of the general population, and retrospective ECG-gated cardiac CT has been shown to be very useful for its assessment. Finding an anchored thrombus in a PFO with imminent risk of systemic embolism is very rare.

In cases of massive PTE it is essential to assess the hemodynamic status, administer heparin early, and evaluate thrombolysis vs surgery, taking into account the possibility of systemic embolism as the main complication.

SUPPLEMENTARY MATERIAL



Supplementary material associated with this article can be found in the online version available at: <http://dx.doi.org/10.1016/j.rec.2016.11.011>.

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