

Incidental diagnosis of isolated persistent left superior vena cava

Vanessa Lopes ,¹ Pedro Carvalho Almeida²

¹Cardiology Department, Centro Hospitalar e Universitario de Coimbra EPE, Coimbra, Portugal
²Medical Imaging Department, Centro Hospitalar e Universitario de Coimbra EPE, Coimbra, Portugal

Correspondence to
Dr Vanessa Lopes;
vlopes.pt@gmail.com

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DESCRIPTION

A man in his 60s presented to the consult with worsening dyspnoea and marked fatigue for a year. Examination revealed bilateral crackles and hypoxemia. ECG and blood tests were unremarkable. Chest X-ray revealed increased reticular markings. A contrast-enhanced chest CT was performed and revealed findings consistent with pulmonary fibrosis, and an isolated persistent left superior vena cava (PLSVC) (figure 1A–B). In the chest CT image, an isolated PLSVC can be seen coursing along the left mediastinum and draining into the right atrium via the coronary sinus (figure 1B). Three-dimensional reconstruction with volume rendering shows the anatomy and configuration of the vascular variant (figure 2). The anatomy of the venous circulation in the right upper extremity and right side of the neck were normal. The transthoracic echocardiography did not reveal any cardiac abnormalities.

Although rare, PLSVC is the most common anomaly of the thoracic venous system, with a prevalence of 0.2%–3%.¹ In most cases, it occurs simultaneously with a right superior vena cava. However, this patient presented an isolated PLSVC, that is, without a right vena cava, which is a particularly rare finding. This is usually an incidental finding but may present important clinical implications such as pose clinical difficulties with central venous access, pacemaker implantation and cardiac surgery.²

The patient was diagnosed with idiopathic pulmonary fibrosis and started treatment with pirfenidone, an antifibrotic drug.

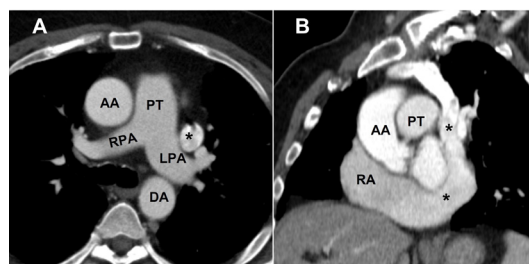


Figure 1 Contrast-enhanced chest CT. (A) Axial CT image. (B) Coronal oblique multiplanar reconstruction. AA, ascending aorta; DA, descending aorta; LPA, left pulmonary artery; PT, pulmonary trunk; RA, right atrium; RPA, right pulmonary artery. *Superior vena cava.



Figure 2 Three-dimension volume rendering cardiac CT image shows an isolated persistent left superior vena cava.

Learning points

- ▶ An isolated persistent left superior vena cava is a rare vascular variant.
- ▶ Despite most often being a benign incidental finding, an isolated persistent left superior vena cava may pose difficulties with central venous access, pacemaker implantation and cardiac surgery.

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

ORCID iD

Vanessa Lopes <http://orcid.org/0000-0002-7807-6043>



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