Ostium secundum atrial septal defect and partial anomalous pulmonary venous connection

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Image description
Partial anomalous pulmonary venous connection is rarely documented in adults. Symptoms occur if more than one anomalous vein is present or associated defects occur, such as sinus venosus atrial septal defect (ASD) or, uncommonly, secundum ASD.

A 47-year-old woman presented with worsening shortness of breath. A small secundum ASD associated with a large, single anomalous pulmonary vein (APV) draining into the inferior vena cava (IVC) was discovered. We postulated that, as a consequence of obesity, newly diagnosed hypertension, and diastolic dysfunction, she became increasingly symptomatic due to increased left-to-right shunting, predominantly through the APV. Successful surgical correction improved her symptoms and reversed her rightsided remodelling and pulmonary hypertension.

Transthoracic echocardiography of the left heart was normal except for the presence of mild diastolic dysfunction, dilated right heart chambers with mild tricuspid regurgitation, and a systolic pulmonary pressure of 55 mmHg.

A transesophageal echocardiogram revealed a small secundum ASD of ~10 mm through which blood shunted from left to right [Panel A]. The most striking feature was a large vessel draining blood into the IVC just above the drainage site of the hepatic veins (HV) [Panel B, Supplementary data online, Video S1]. The left pulmonary veins were draining into the left atrium.

A 64-mm computed tomography angiogram of the chest confirmed normal pulmonary arteries and lung architecture. A large, single, right-sided APV draining into the IVC below the diaphragm was noted [Panels C (anterior view of thorax) and D (posterior view of thorax)]. RA, right atrium.

Conflict of interest: none declared.

Supplementary data are available at European Heart Journal – Cardiovascular Imaging online.

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