Left common pulmonary venous ostium mimicking aneurysmal left atrial appendage on transthoracic echocardiography

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A 67-year-old female suffering from dyspnoea on exertion underwent echocardiography, which showed dilated left ventricle, decreased left ventricular ejection fraction (25%), moderate mitral regurgitation. The echocardiogram also revealed an extension resembling an aneurysmatic left atrial appendage (Panel A, asterisk). To further delineate the anatomy, she was referred to cardiac computed tomography (CT), which showed coalescing left sided pulmonary veins forming a large common ostium draining to the left atrium (Panels B and C, asterisk). The left atrial appendage is seen as a cauliflower-shaped structure on 3D rendered CT image which arises from the superolateral aspect of the left atrium and bends anteriorly over the proximal left circumflex artery (Panel B, arrow).

A comprehensive knowledge of these anatomic variants has become increasingly important as the number of percutaneous interventions involving pulmonary ostia and left atrial appendage has increased. The two most common pulmonary venous (PV) anomalies are the presence of a right middle PV and common left trunk. Studies have shown prevalence rates of 2–39% for a right common ostium and 14–83% for a left common ostium.

Differentiation of a pulmonary common ostium from an atrial appendage aneurysm could be made with transoesophageal echocardiography (TOE), CT and magnetic resonance imaging (MRI). CT has the advantages of showing the surrounding structures better than TOE and easily accessible compared with MRI.

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