Idiopathic Enlargement of the Right Atrium Accompanied by Persistent Superior Vena Cava: A Rare Case

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An asymptomatic 60-year-old woman was referred for further investigation with a chest X-ray abnormality. Physical examination and an electrocardiogram were normal. A chest X-ray showed enlargement of the right atrium (ERA)

Picture 1.  (A) A chest X-ray showing enlargement of the right atrium (RA) (arrow), (B) An echocardiogram showing dilatation of the coronary sinus (CS) (arrow), (C) A multislice computed tomogram showing enlargement of the RA, (D) A multislice computed tomogram showing persistent left superior vena cava (SVC) (arrow) which drained into the RA through the CS. LAD: left atrial dimension, LVDd: left ventricular end-diastolic dimension, LVDs: left ventricular end-systolic dimension, LVEF: left ventricular ejection fraction
Echocardiograms revealed dilatation of the coronary sinus (CS) (Picture 1B), ERA, and mild tricuspid regurgitation, without other cardiac abnormalities. Multislice computed tomograms showed ERA (Picture 1C) and persistent left superior vena cava (SVC) which drained into the right atrium through the CS (Picture 1D). Pulmonary arterial, pulmonary capillary wedge, and right atrial pressures were normal. Step-up in O₂ saturation was not observed in the right SVC, inferior vena cava, or right side cavity. Coronary angiography and left ventriculography revealed intact coronary arteries and normal left ventricular wall motion, respectively. She was diagnosed as having idiopathic ERA and persistent left SVC. To the best of our knowledge, this is the first English language case report of idiopathic ERA accompanied by persistent left SVC.