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Research Letter

A huge echolucent structure resembling cyst adjacent to left atrium: Revealing persistent left superior vena cava with 4D echocardiography

Keywords:
Persistent left superior vena cava
Giant coronary sinus
4D transthoracic echocardiography

Persistent left superior vena cava (PLSVC) is the most common congenital thoracic venous anomaly with a prevalence of 0.3–0.5%.[1–4] PLSVC can be associated with other cardiovascular abnormalities such as atrial septal defect, bicuspid aortic valve, coarctation of aorta, coronary sinus ostial atresia, and cor triatriatum.[5] A 81-year-old male was admitted to syncope and palpitation. He had history of hypertension and paroxysmal atrial fibrillation. Physical examination was normal. Cranial MRI was normal. 2D and 4D transthoracic echocardiography revealed normal findings except *moderate mitral regurgitation* and a hugely dilated coronary sinus suggestive of a PLSVC in apical 4-chamber view (Fig. 1). Agitated saline contrast study from the left antecubital vein demonstrated prior contrast enhancement of this giant coronary sinus before the right atrium on 2D and 4D transthoracic echocardiography (Fig. 2). *We thought his syncope attack due to orthostatic hypotension*. The patient was discharged with warfarin, angiotensin-converting enzyme inhibitor, and beta-blocker.

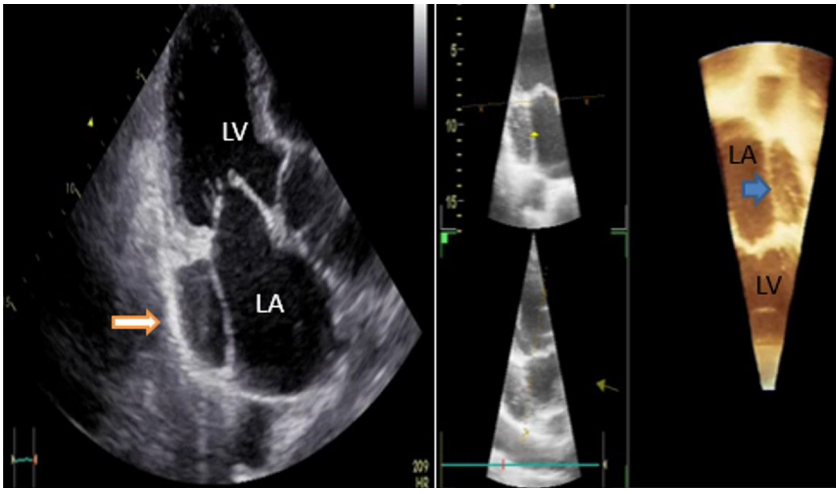

Fig. 1 – Persistent left superior vena cava mimicking left atrial cyst on 2D and 4D echocardiography.

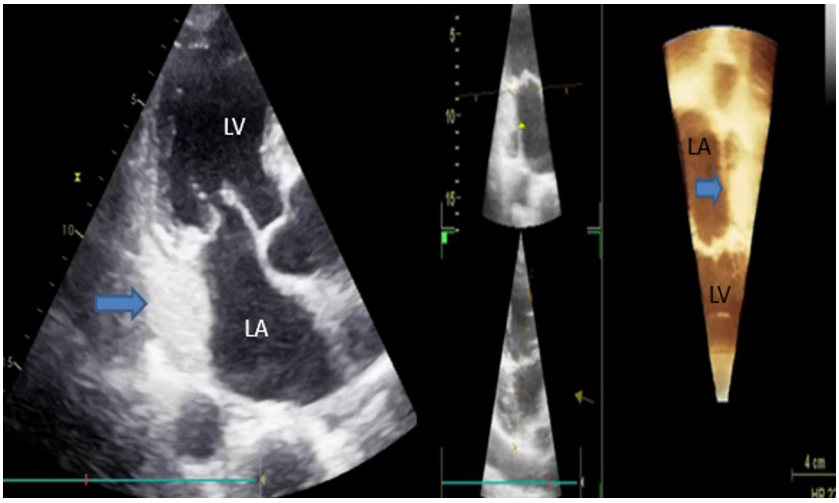

Fig. 2 – Persistent left superior vena cava on 2D and 4D echocardiography after agitated saline infusion.

Conflicts of interest

The authors have none to declare.

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