**Introduction**: A 70-year-old lady felt dyspnea on exertion and orthopnea breathing at night and was admitted to our hospital. She was diagnosed as dilated cardiomyopathy by myocardial biopsy, she has been treated with medication and adaptive servo ventilation. But she was hospitalized for congestive heart failure again, and underwent a cardiac resynchronization therapy defibrillator (CRTD).

**Methods**: We planned to implant CRTD from the left side. But left subclavian venography revealed persistent left superior vena cava (PLSVC), so we changed to implant CRTD from the right side. An angiographic catheter was inserted into PLSVC from the right atrium and left superior venography was performed. PLSVC and coronary sinus (CS) had different draining to the right atrium, and CS was narrowed. It made difficult to insert a CS vascular sheath into CS. Therefore, we inserted the CS electrode first as a guide of the sheath.

**Result**: Finally, we could insert a left ventricular lead into the CS lateral branch. Although many PLSVCs drain to the right atrium through CSs,

**Conclusion**: PLSVC and CS may drain to the right atrium independently as in this case.