

Pacemakers implantation in Persistent left SVC

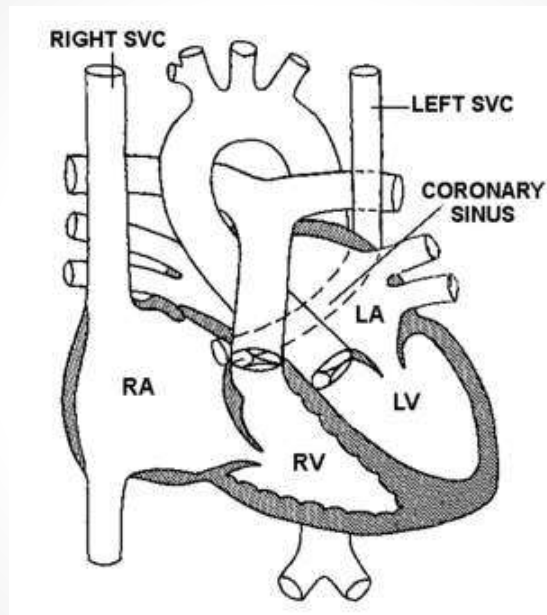
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Introduction :

- Persistent left superior Vena Cava (SVC) is a common congenital venous anomaly in the chest venous system.
- It represents 0.3 to 0.5% of normal population & 5% in patients with congenital cardiac anomalies e.g., ASD, VSD , ..etc.

Etiology

- Early in fetal life, the sinus venosus has three parts (Right horn, transverse, and left horn) that drain three veins (omphalomesenteric, umbilical, and common cardinal veins)
- The **anterior cardinal veins** drain the upper body and the right and left anterior cardinal veins ultimately join to form left brachiocephalic vein
- Normally the **left anterior cardinal vein** involutes (ligament of Marshall). Failure to involute results in PLSVC
- PLSVC arises at the junction of the left jugular and subclavian veins & opens in a dilated coronary sinus



How did the story begin!!

**** A 55 year-old lady presented with infected pacemaker implanted in the right subclavian vein 3 months before presentation**

****The indication for implantation was degenerative heart block.**

Our plan in this patient was :

Exclusion of infective endocarditis (by blood culture extraction, Trans thoracic and trans esophageal Echocardiography).

Extraction of the right sided pacemaker and temporary pacemaker implantation

Trial implantation from the left side after performing venography.

First session :

- Extraction of the pacemaker battery & leads (right side).
- Temporary pacemaker implantation.
- Left side venography from the antecubital vein to show the venous anatomy.

**Left side venography
showed persistent left
superior vena cava opens
into dilated coronary sinus.**

Our plan was ...

- try to implant from the left side through persistent left SVC → CS → RA & RV**

Another case !!

- twenty year-old lady presented with CHB as a complication of closure of ASD .
- DDD pacemaker implantation was our plan.
- During the procedure we discovered she has a persistent left SVC!!!!

And here another case !!!

- 55 year-old lady presented to us with sick sinus syndrome .
- Our plan was to insert a DDDR pacemaker

Take home message

- The anatomic challenges presented by persistent left SVC can generally be overcome by an experienced operator who carefully manipulates the leads through the coronary sinus and into appropriate anatomic positions

Thank you