ARTERIAL SUPPLY OF HEART:

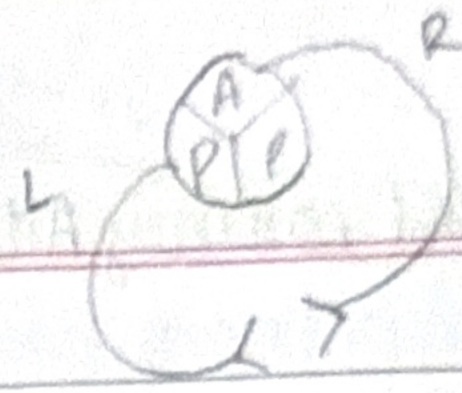
The heart is supply by two coronary arteries called Right and left coronary Arteries - arising from ascending Aorta.

Right coronary Artery:

Position: Arises from Ant. Aortic sinus. smaller than Lt. coronary arteries.

✓ Course: 1st passes forward b/w root of pulmonary trunk & Rt auricle
- Then Run downward - Rt Ant coronary sulcus
- winds around the ~~Rt~~ inf border to reach diaphragmatic surface of heart.

✓ Termination: by Anastomosis with Lt coronary artery - circumflex branch.



✓ Branches

⇒ Arterial Branch → They supply the Atria, Sinuatrial nodal Arty supplies SA node in 60%. of 40%. it arise from Lt coronary artery.

⇒ Right conus Artery: Form circle around pulmonary trunk.

⇒ Ventricular branch: Ant of Post grup. → supply the diaphragmatic surface of RV
↳ Right Marginal Branch. (Largest)
(middle cardiac vein)

⇒ Post interventricular artery: lie in post inter ventricular groove. up to apex. supply: → AV node, Rt & Lt vent, Post part of IVS

Area of Distribution:

⇒ Rt Atrium

⇒ Ventricle - Greek part of Rt ventricle - except area adjacent interventricular groove.

⇒ Small part of Lt ventricle.

⇒ Whole conducting system (SA & AV) except a part of Lt branch of AV bundle (Lt. CA)

Lft coronary Artery.

Portion:- Arises from Lft aortic sinus.

Course:- Run forward to Lft end emerge b/w pulmonary trunk & Lt auricle.

- Here it give the Anterior interventricular Branch. (LADA)
- Further continuation LCA is called circumflex Art
- It wind around Lt border of heart of Lt coronary sulcus.

Termination: Anastomosis with RCA.

Branches:

- Ant interventricular branch. - Largest branch. → Marginal LCA
- circumflex branch is terminate part of LCA.
- ~~Ant, post ventricular branch~~ (diagonal Arts) → From Ant LCA
- Ant branch - Supply left Atrium.
- Conus Arty → supply pulmonary conus.

Area of distribution: Lt atrium
=> ventricle → left.
=> Ant part of IVS

coronary dominance:

Right CD → PIVA - Branch of Right coronary Artery in 90%.
Left CD → PIVA → Branch of Lft coronary Artery in 10%.

Clinical significance:

→ LADA is main coronary occl

1) Myocardial Infraction (Thrombosis) - Asudden block of CA or of its largu branch lead to Myocardial ischaemia. cause death. This is termed as heartattack
=> Sensenation of pain, pressure in chest.
=> Nausea, vomiting, sweating, breathlessness
=> Pain Radiate to Medial side of arm forearm hand.

2) Angina pectoris: If LA are narrowed the blood supply of Reduced to cardiac muscle.
=> pain in left shoulder & left arm & forearm
=> Pain occur on exertion.

=> Coronary Angiography → Radiological Procedure to view CA. after injecting contrast medium.
=> coronary bypass surgery => Great saphenous vein is used.

Venous Drainage of the heart:

⇒ Drained into the Right Atrium by:

- Coronary sinus
- Anterior cardiac veins
- Venae cordis minimae.
  → open directly into Rt. Atrium.

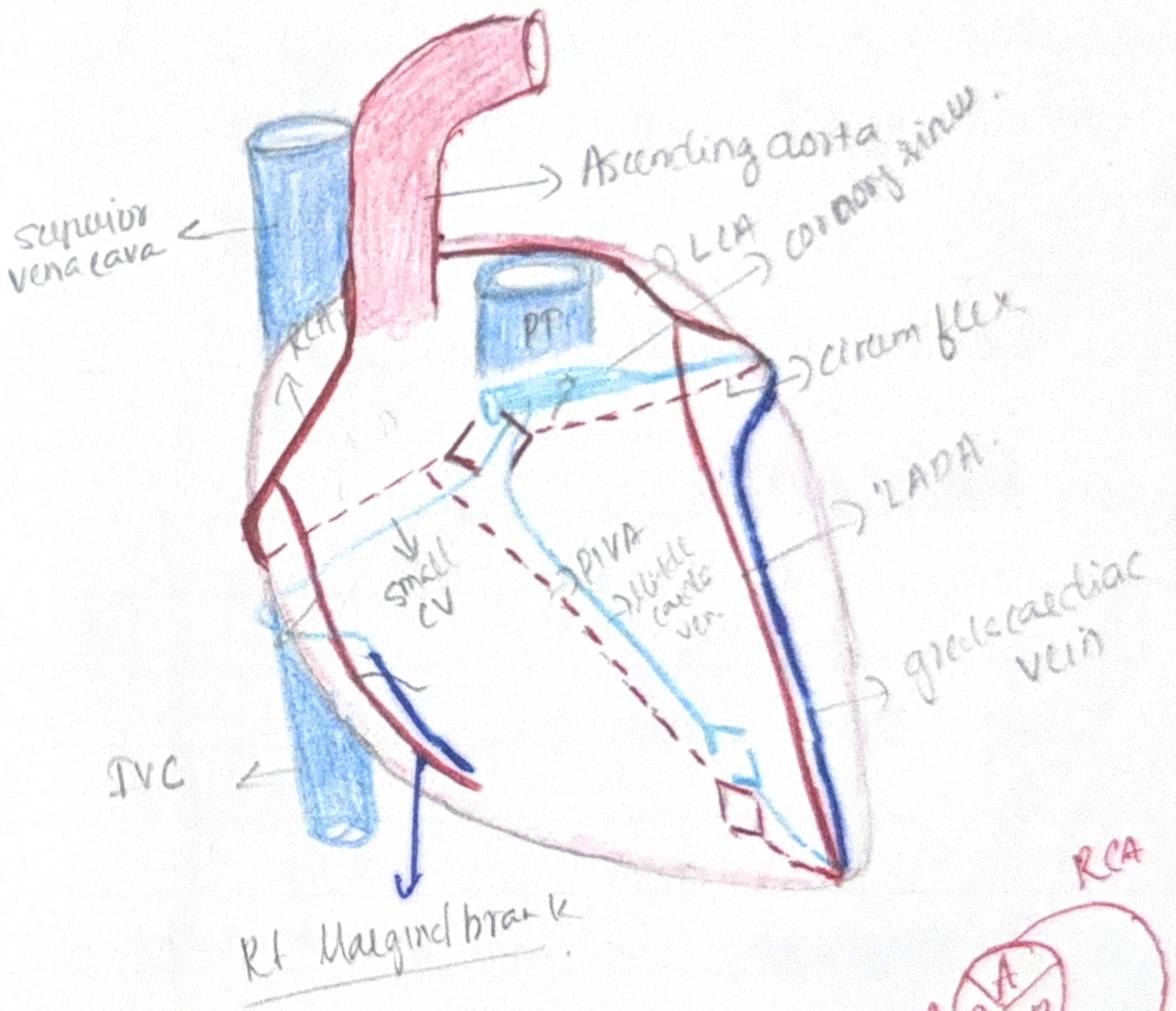
Coronary sinus: Largest vein of heart.
- situated in Lt post coronary sulcus end into Rt atrium.

Tributaris.

① Great cardiac vein – Accompany 1st Ant ventricular Art
② Middle cardiac vein – Acc. Post interventricle Artery
③ Small cardiac vein – Acc. Rt coronary Artery.
④ Rt Marginal vein → Acc. Marginal Branch of Rt CA.
⑤ Post vein of Lt Ventr → Run on diaphramtic surface on Lt V
⑥ Oblique vein of Lt Atr → Running of post surf of Lt atrium.

Ant. cardiac vein → 3 to 4 small vein which run ⊥ to each other & open directly into Rt atrium.

Venae cordis Minimal → Numerous small valvular vein present in all 4 chambers of heart – Directly open Atrium.



dotted represent – posterior side
light blue → posterior vein (side).
dark blue → Anterior side.
CV → cardiac vein.
CA → Coronary Artery.