

- about 2/3rds of the venous drainage of the heart is by veins which accompany the coronary arteries & which open into the right atrium
- the rest of the blood drains by means of the small veins (venae cordis minimae) directly into the cardiac cavity

- the coronary sinus receives the:
(i) great cardiac vein in the anterior interventricular groove
(ii) middle cardiac vein in the inferior interventricular groove
(iii) small cardiac vein which accompanies the marginal artery along the lower border of the heart
(iv) oblique vein which descends obliquely on the back of the left atrium which opens near the left extremity of the coronary sinus

- the anterior cardiac vein lies in the anterior atrioventricular groove
- it drains much of the anterior surface of the heart and opens directly into the right atrium

venous drainage

blood supply of the heart

right coronary

- the right coronary artery arises from the anterior sinus & passes forwards between the pulmonary trunk and the right atrium
- it descends in the right part of the atrioventricular groove to anastomose near the apex of the heart with the corresponding branch of the left coronary artery

- the RCA supplies the:
(i) lateral wall of the right ventricle
(ii) posterior wall of the right ventricle
(iii) inferior wall of the left ventricle
(iv) sinoatrial node in 55% of patients

- in 85% of patients the RCA terminates as the posterior descending artery (right dominant)

left coronary

- the left coronary is larger than the right. It arises from the aortic sinus.
- it passes first behind and then to the left of the pulmonary trunk, reaches the left part of the atrioventricular groove in which it runs laterally round the left border of the heart to reach the inferior interventricular groove

- the left coronary divides into the LAD and circumflex arteries
- the LAD gives rise to diagonal branches
- the circumflex gives rise to obtuse marginal branches

LAD & diagonal branches supply:
(i) the anterolateral wall of the left ventricle
(ii) the interventricular septum
(iii) the anterior wall of the right ventricle
(iv) the ventricular apex

the circumflex & obtuse marginal arteries give rise to:
(i) the left atrium
(ii) the posterior wall of the left ventricle
(iii) the lateral wall of the left ventricle