

Anatomy Team

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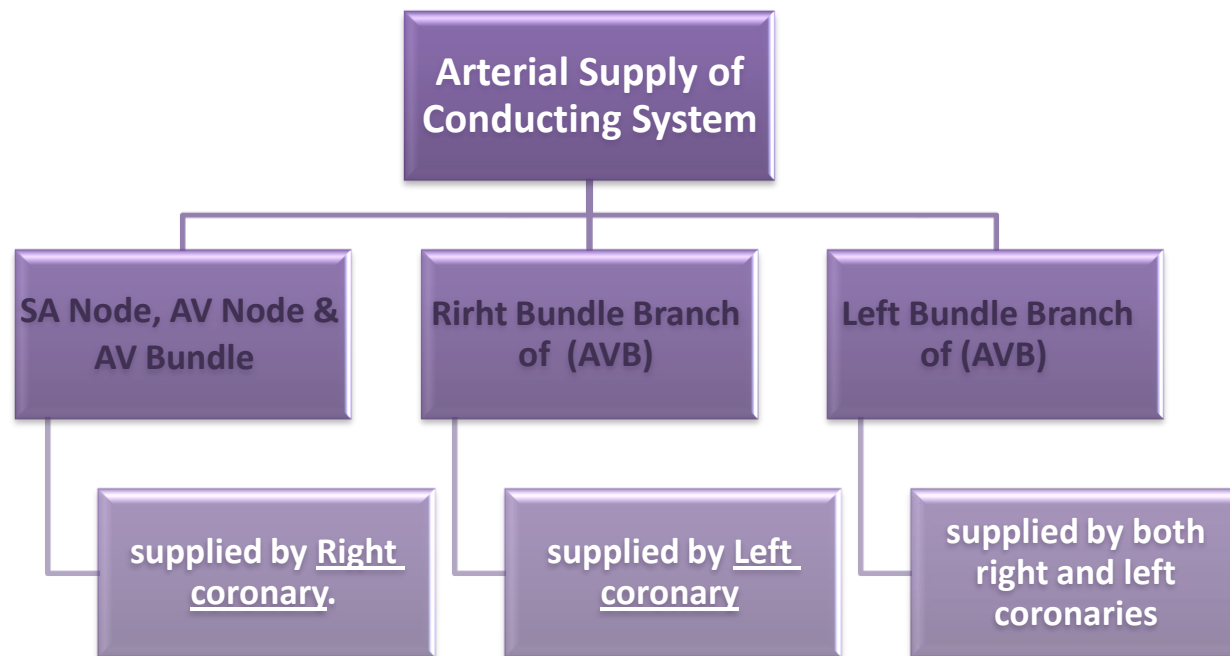
2011-2012

Cardiovascular block

Artery	Origin	Supply	Notes	Branches	Supply	Notes
Right Coronary artery	initial part of the <i>Ascending Aorta</i> . (Immediately above the aortic valve). -Arises from the <i>anterior aortic sinus</i> of the ascending aorta.	*Right atrium, *Right ventricle *part of Left Atrium, *Left ventricle & Atrioventricular septum.	-Descends in the <i>right atrioventricular groove</i> between the <i>Right Auricle</i> and the <i>Pulmonary trunk</i> . -At the inferior border of the heart it <i>continuous posteriorly</i> to anastomose with the left coronary.	-Right Conus artery	-To the infundibulum and the upper part of the anterior wall of the right ventricle.	The <i>Marginal artery</i> is the largest branch.
				Anterior Ventricular arteries	-To the anterior surface of the right ventricle.	
				Posterior ventricular arteries	-To the diaphragmatic surface of the right ventricle.	
				Atrial branches	-To the right atrium - <i>The Artery of the SAN</i> .	
				Posterior Interventricular Artery	a. Diaphragmatic surface of the Right & Left Ventricles. b. Posterior part of the IVS Excluding its <i>Apex</i> . c. Septal branch to the AVN.	
Left Coronary Artery	initial part of the <i>Ascending Aorta</i> . (Immediately above the aortic valve). -Arises from the <i>left posterior aortic sinus</i> of the ascending aorta.	-Greater part of Left Atrium, -Left Ventricle and Ventricular Septum	-The Larger of the two coronaries. - <u>Descends</u> : Between the pulmonary trunk and the left auricle. -In the <i>IV groove</i> to the apex of the heart. -It anastomoses with the right coronary in the posterior IV groove (<i>in 2/3 of people</i>)	Circumflex artery	<i>Left Marginal</i> to the left margin of the LV till the apex.	Ventricular branches to both ventricles and the Inter Ventricular septum.
				Anterior Interventricular Artery	- <i>Left (Lateral diagonal)</i> - <i>Anterior & Posterior ventricular to (LV)</i> - <i>Atrial to (LA)</i>	

Variations of the Coronary Arteries	
Right dominance	Left dominance
In (90 %) of population, the Posterior Interventricular artery is a branch of the Right Coronary.	In the rest (10%), the Posterior Interventricular artery arises from the Circumflex branch of the Left Coronary Artery

Coronary Anastomosis: Anastomoses between terminal branches of the right and left coronaries exist but **not large enough** to provide adequate blood supply.



Venous Drainage

Vein	drainage
1. <i>Anterior cardiac veins</i>	<i>Open directly into the Right Atrium.</i>
2. <i>Venae Cordis minime</i>	<i>Open into the heart chambers.</i>
3. <i>Coronary sinus</i>	<u><i>It empties into Right Atrium.</i></u>

Vein	origin	Tributaries	Notes
<i>Coronary sinus</i>	It is the direct continuation of the <u><i>Great Cardiac Vein.</i></u>	<p><i>(1) Cardiac Veins:</i></p> <p>A. Great.</p> <p>B. Middle.</p> <p>C. Small.</p> <p><i>(2) Oblique vein of left atrium.</i></p>	<p>-Drains most of the venous blood of the heart.</p> <p>-Lies in the posterior part of the AV groove.</p> <p>-Its opening is inferior & to the left of the IVC opening.</p> <p>-It is guarded by a valve.</p>

Questions:

What part of the heart will become ischemic & die if a blood clot gets lodged in the first part of the circumflex branches of the left coronary artery?

1-right atrium and ventricle

2- left ventricle

3- left atrium.

4- both 2&3.