SNS COLLEGE OF ALLIED HEALTH SCIENCES

SNS Kalvi Nagar, Coimbatore - 35

Affiliated to Dr MGR Medical University, Chennai

DEPARTMENT : OPERATION THEATRE AND ANAESTHESIA TECHNOLOGY

COURSE NAME: ANATOMY

UNIT : HEART

TOPICS : CHAMBERS AND VALVES OF THE HEART

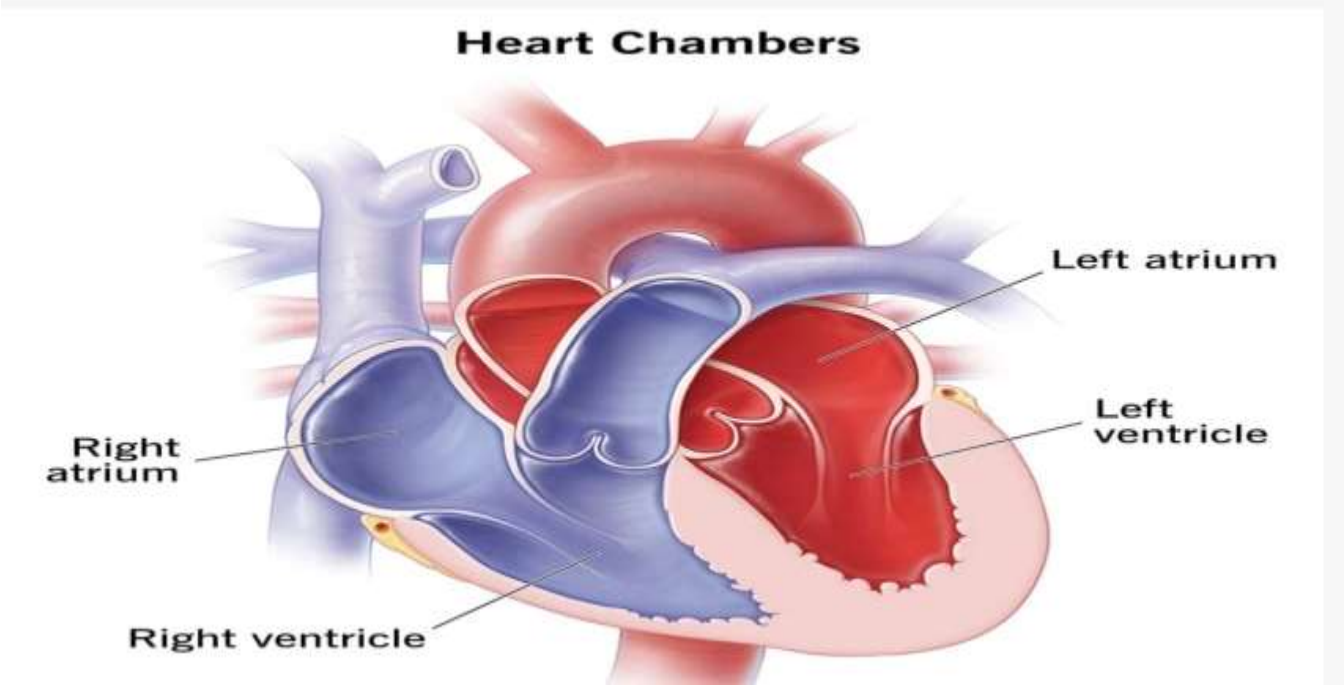
CHAMBERS OF THE HEART

Right Atrium:

- Receives deoxygenated blood from the superior vena cava (bringing blood from the upper body) and the inferior vena cava (bringing blood from the lower body).

- Also receives blood from the coronary sinus, which collects blood from the heart muscle itself.

- Contracts to push blood through the tricuspid valve into the right ventricle.


Heart Chambers
Left atrium
Left ventricle
Right atrium
Right ventricle

Right Ventricle:

- Receives deoxygenated blood from the right atrium.
- Contracts to pump blood through the pulmonary valve into the pulmonary artery, sending it to the lungs for oxygenation.

Left Atrium:

- Receives oxygenated blood from the lungs through the pulmonary veins (four in total)
- Contracts to push blood through the bicuspid (mitral) valve into the left ventricle.

Left Ventricle:

- Receives oxygenated blood from the left atrium.
- Contracts to pump blood through the aortic valve into the aorta, sending it to the rest of the body.

Valves of the Heart

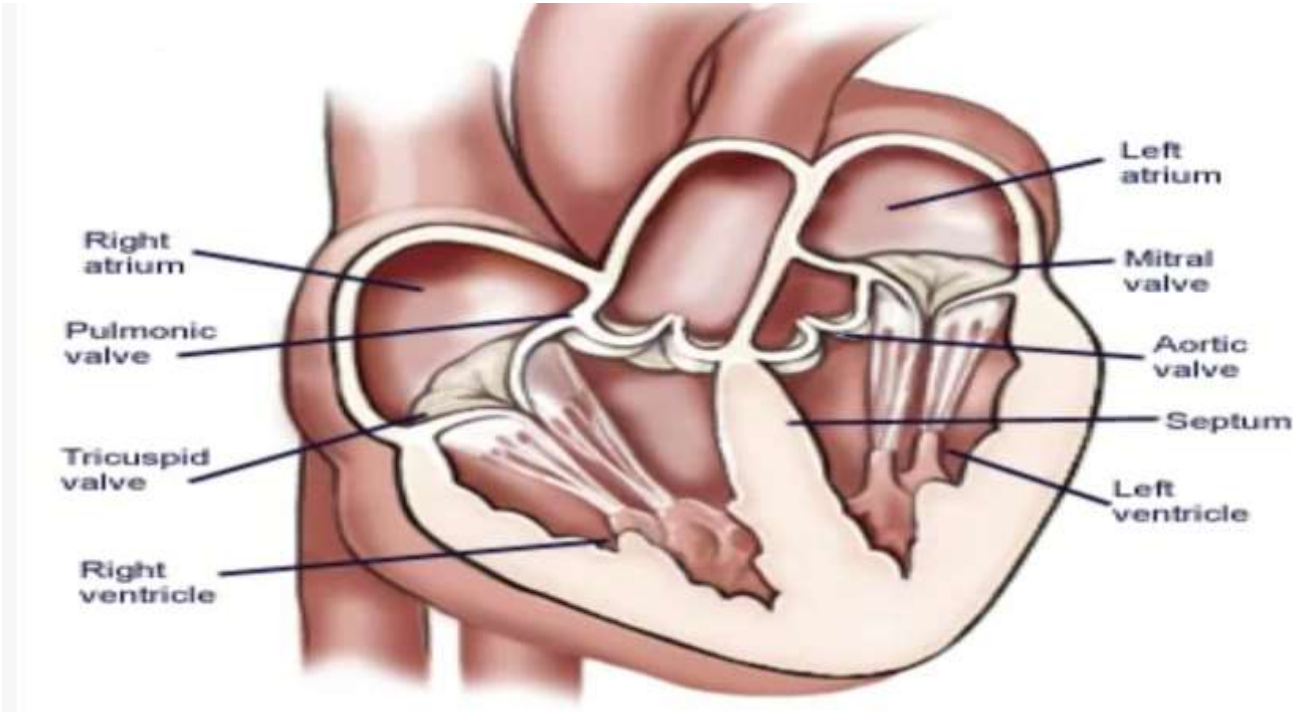
Atrioventricular (AV) Valves:

Tricuspid Valve:

- Located between the right atrium and the right ventricle.
- Composed of three cusps (flaps).
- Prevents the backflow of blood from the right ventricle into the right atrium during ventricular contraction.

Bicuspid (Mitral) Valve:

- Located between the left atrium and the left ventricle.
- Composed of two cusps.
- Prevents the backflow of blood from the left ventricle into the left atrium during ventricular contraction.


Left atrium
Right atrium
Mitral valve
Pulmonic valve
Aortic valve
Septum
Tricuspid valve
Left ventricle
Right ventricle

Ascending Aorta:

- Originates from the left ventricle.
- Carries oxygenated blood to the systemic circulation.

Superior Vena Cava:

- Large vein bringing deoxygenated blood from the upper body into the right atrium.

Inferior Vena Cava:

- Large vein bringing deoxygenated blood from the lower body into the right atrium.

Semilunar Valves:

Pulmonary Valve:

- Positioned at the base of the pulmonary trunk.
- Consists of three semilunar cusps.
- Prevents the backflow of blood from the pulmonary artery into the right ventricle during ventricular relaxation.

Aortic Valve:

- Positioned at the base of the aorta.
- Consists of three semilunar cusps.
- Prevents the backflow of blood from the aorta into the left ventricle during ventricular relaxation.

ASSESSMENT

- What all are the Chambers of the Heart ?
- What all are the Valves of the Heart ?