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**MATRIC NUMBER:18/MHS01/295**

**DEPARTMENT: ANATOMY**

**COURSE CODE: ANA 202**

**Write on five (5) different congenital anomalies of the heart**

A congenital heart defect (CHD), also known as a congenital heart anomaly and congenital heart disease, is a defect in the structure of the heart or great vessels that is present at birth.

**Aortic valve stenosis**

Aortic valve stenosis is a serious type of congenital heart defect.

In aortic valve stenosis, the aortic valve that controls the flow of blood out of the main pumping chamber of the heart (the left ventricle) to the body's main artery (the aorta) is narrowed. This affects the flow of oxygen-rich blood away from the heart, towards the rest of the body, and may result in the left ventricle muscle thickening because the pump has to work harder.

**Coarctation of the aorta**

Coarctation of the aorta (CoA) is where the main artery (the aorta) has a narrowing, which means that less blood can flow through it.

CoA can occur by itself or in combination with other types of heart defects – such as a ventricular septal defect or a type of defect known as a patent ductus arteriosus.

The narrowing can be severe and will often require treatment shortly after birth.

**Ebstein's anomaly**

Ebstein's anomaly is a rare form of congenital heart disease, where the valve on the right side of the heart (the tricuspid valve), which separates the right atrium and right ventricle, doesn't develop properly. This means blood can flow the wrong way within the heart, and the right ventricle may be smaller and less effective than normal.

Ebstein's anomaly can occur on its own, but it often occurs with an atrial septal defect.

**Pulmonary valve stenosis**

Pulmonary valve stenosis is a defect where the pulmonary valve, which controls the flow of blood out of the right heart pumping chamber (the right ventricle) to the lungs, is narrower than normal. This means the right heart pump has to work harder to push blood through the narrowed valve to get to the lungs.

**Tetralogy of Fallot**

Tetralogy of Fallot is a rare combination of several defects.

The defects making up tetralogy of Fallot are:

* ventricular septal defect – a hole between the left and right ventricle
* pulmonary valve stenosis – narrowing of the pulmonary valve
* right ventricular hypertrophy – where the muscle of the right ventricle is thickened
* overriding aorta – where the aorta isn't in its usual position coming out of the heart

As a result of this combination of defects, oxygenated and non-oxygenated blood mixes, causing the overall amount of oxygen in the blood to be lower than normal. This may cause the baby to appear blue (known as cyanosis) at times.

**You will be provided with a video, watch it and use it to describe the heart and its functions.**

* The heart is a musle that is about the size of a fist.
* It lies behind and to the left of the breast bone.
* It pumps blood through the vessel; arteries and veins to all parts of the body
* It consists of four (4) chambers:

1. Right Atrium
2. Left Atrium
3. Right ventricle
4. Left ventricle

* The atria (right and left) are called the collection chambers.
* The ventricles(right and left) recieve blood from the atria and pump it to the lungs and the body.
* These chambers are separated by four (4) valves:

1. Tricuspid valve
2. Pulmonic valve
3. Mitral valve
4. Aortic valve

* **The right side of the heart:**

1. This is where circulation begins
2. Blood comes from the Right atrium to the right ventricle to the lungs to become oxygenated to te left atrium and left ventricle to the aorta and then pumped to the body.
3. The tricuspid valve separates the right atrium and right ventricle thus allowing blood to enter the ventricle but not the atrium.
4. Blood flows through the pulmonic valves to the lungs.

* **The left side of the heart:**

1. Mitral valves separtes the right atrium and left valves.
2. Blood gfrom the left ventricle goes to the aorta and body through the aortic valves,

* **ARTERIES**

1. Carries oxygenated blood and nutrients to the body.

* **VEINS**

1. Takes blood to the heart then to the lungs to become oxygented.

* **CORONARY ARTERIES**

1. Provide nutrients and oxygen to the heart muscles.

* **RIGHT CORONARY ARTERIES**

1. Supplies blood to the botttom and back of the heart.

* **LEFT CORONARY ARTERIES**

1. Has 2 branches
2. One branch supplies the front side of the heart
3. The second branch supplies the left side of the heart.

* Electric signals start in the Sino Atrial (SA) node in the upper part pf the right atrium also known as the natural pacemaker then to the AtrioVentricular(AV) node to he bottom of the heart hence causing it to contract before ventricles.
* Ventricle pathways carry the signals through the heart to contract at the sam time to pump blood to the lungs amd the rest of the body.