**AUGOYE OMESIRI**

**18/MHS01/094**

**ANATOMY**

**ANA 202**

**The Heart and Its Function**

The heart is a muscle about the size of your fist. It lies behind the left of the breast bone or sternum. It main function is to pump blood through arteries, blood vessels and veins to all parts of the body. The inside is divided into four chambers. The top two chambers are called the atrium, they are collection chambers for blood. The bottom two chambers are called ventricle, and receive blood from the atrium and to the lungs and body. The chambers are separated by valves which could be control the direction of blood flow. They are four valves which are:

* Aortic valve.
* Mitral valve.
* Tricuspid valve.
* Pulmonic valve

Circulation begins at the right side of the heart where blood from the body comes to the right atrium as it passes to the right ventricle where it is taken to the lungs to receive oxygen. Once it receives oxygen it flows to the left atrium then to the left ventricle where it is taken to the aorta and rest part of the body. On the right side the tricuspid valve separates the right atrium and ventricle allowing blood flow to the ventricle but not back to the aorta. On the right side blood flows through the pulmonic valve to the lungs, on the left side the mitral separates the left atrium and ventricles. Blood flows from the left ventricle to the aorta through the aortic valve and the rest of the body. Arteries carry oxygenated blood and other nutrients throughout the body, veins carry deoxynated blood to heart which pumps to the lungs to be oxygenated. The heart arteries, coordinating arteries supplies oxygen and nutrients to the muscle.

**Congenital Anomalies of the Heart**

**Five (5) Different Congenital Anomalies of the Heart Are:**

**Congenital heart disease refers to a range of possible heart defects.**

**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.

**Patent ductus arteriosus**

As a baby develops in the womb, a blood vessel called the ductus arteriosus connects the pulmonary artery directly to the aorta. The ductus arteriosus diverts blood away from the lung (which isn't working normally before birth) to the aorta.

A patent ductus arteriosus is where this connection doesn't close after birth as it's supposed to. This means that extra blood is pumped into the lungs, forcing the heart and lungs to work harder.

**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.