Festus-Ifode Ewomaoghene Chidera

18/MHS01/163

ANATOMY

ANA 2O2

**Question**

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

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

**Answers**

1. The Heart and its functions

* The Heart is a muscle that is the size of a fist.
* It is located behind and to the left of the sternum.
* It is divided into 4 chambers. Left atrium and ventricle and the Right atrium and ventricle.
* The top two chambers (Left and Right Atrium) are for collecting blood.
* The other two chambers (Left and Right Ventricle) receive blood from the atria and pump it to the rest of the body.
* The chambers are separated by valves. These are 4 in number : Tricuspid Valve, Pulmonary Valve, Mitral Valve and the Aortic Valve
* Circulation begins at the right side of the heart where blood in the body comes through the right atrium. This blood passes through the right ventricle where it is pumped to the lungs to receive oxygen. Once it receives oxygen, it flows to the left atrium to the left ventricle to the aorta which pumps the blood to the body.
* The Coronary arteries provide nutrients and oxygen to the heart muscles.
* The Right Coronary arteries supplies blood to the bottom and back of the Heart.
* The Left Coronary arteries split into two branches; one branch to the front of the heart and the other delivers to the left side of the heart.
* An electrical signal controls the pumping of the heart and it originates from the sinoatrial node. It is the natural pacemaker of the heart.
* These impulses are passed through the atrioventricular node which controls the signals so that the Atria contract before the Ventricle.

Functions of the Heart

* Transport of nutrients, oxygen, and hormones to cells throughout the body and removal of metabolic wastes.
* Regulation of body temperature, fluid pH, and water content of cells.

2. Congenital anomalies of the heart

* **Tricuspid atresia: It** is a form of congenital heart disease whereby there is a complete absence of the tricuspid valve. Therefore, there is an absence of right atrioventricular connection. This leads to a hypoplastic (undersized) or absent right ventricle. This defect is contracted during prenatal development, when the heart does not finish developing. It causes the heart to be unable to properly oxygenate the rest of the blood in the body.
* **Cardiomyopathy:** is a group of diseases that affect the heart muscle. Early on there may be few or no symptoms. As the disease worsens, shortness of breath, feeling tired and swelling of the legs may occur, due to the onset of heart failure.  An irregular heart beat and fainting may occur. Those affected are at an increased risk of sudden cardiac death.
* **Mitral stenosis:** is a valvular heart disease characterized by the narrowing of the orifice of the mitral valve of the heart. It is almost always caused by rheumatic valvular heart disease.
* **Aortic stenosis:**  is the narrowing of the exit of the left ventricle of the heart (where the aorta begins), such that problems result.It may occur at the aortic valve as well as above and below this level.It typically gets worse over time.
* **Bicuspid aortic valve:** is an inherited form of heart disease in which two of the leaflets of the aortic valve fuse during development in the womb resulting in a two-leaflet valve (bicuspid valve) instead of the normal three-leaflet valve (tricuspid). BAV is the most common cause of heart disease present at birth and affects approximately 1.3% of adults.