Name: Ezenwobi Chiamaka Anne

Matric number: 18/mhs07/020

Department: Pharmacology

Course code: ANA 202

Question: Using the video in the note, describe the heart and its function

The heart is a muscle about the size of the fist, its lies behind the left of the breast bone supplying oxygen and nutrients to the tissues and removing carbon dioxide and other wastes. The purpose of the heart is to pump blood from the blood vessels, arties and veins to all parts of the body.

The heart is divided into four chambers which are;

1. The top two chambers which are called the atria and are collection chambers for blood.
2. The bottom two chambers are called the ventricles and receives the blood from the atria and pump it into the lungs and the body.

The heart has four chambers:

- The right atrium receives blood from the veins and pumps it to the right ventricle.
- The right ventricle receives blood from the right atrium and pumps it to the lungs, where it is loaded with oxygen.
- The left atrium receives oxygenated blood from the lungs and pumps it to the left ventricle.
- The left ventricle (the strongest chamber) pumps oxygen-rich blood to the rest of the body. The left ventricle's vigorous contractions create our blood pressure.

The chambers are separated by valves which controls the direction of blood flow. They are four chambers which are:

i. Tricuspid valve

ii. Pulmonic valve

iii. Aortic valve

iv. Mitral valve

Circulation begins at the right side of the heart where blood from the body comes to the right atrium this blood passes to the right ventricle where it pumps to the lungs to receive oxygen. Ones it receives oxygen. It flows to the left atrium then to the left ventricle where it pumps to the aorta to the rest of the body. On the right side of the heart the tricuspid valve separates the right atrium and the right ventricle allowing blood to enter the ventricle then flow backwards to the atrium. Blood flows from the pulmonic valve to the lungs.

On the left side of the heart the mitral valve separates the left atrium from the left ventricle, blood flows from the left ventricle to the aorta through the aortic valve to the rest of the body.

Arteries carry blood with oxygen and nutrients throughout the body. Veins take blood back to the heart which pumps it to the lungs to be oxygenated. The heart atrie, Coronary artery provide blood to the bottom and back of the heart, the left conary atrie split into two vessels. One branch supplies blood to the front of the heart, the other branch delivers to the left side of the heart. An electrical system starts in the sinoatrial (SA node) which is located in the upper portion of the right atrium which is known as natural pace maker of the heart. The electrical signal passes through the lower chamber of the heart by the atrio ventricular or AV node which controls the signal so the atrio contracts before the ventricles. In the ventricles pathways carries the signal round the muscle so they contract at the same time to pump blood to the lungs and through the body.

Question 2: write on the five different congenital anomalies of the heart

1. Hole in the Heart (Septal Defect)

This means you're born with a hole in the wall, or septum, that separates the left and right sides of your heart. The hole lets blood from the two sides mix. Treatments:

Cardiac catheterization

2. Atrial Septal Defect (ASD)

An atrial septal defect is a hole in the wall between the upper chambers, or the right and left atria, of your heart. A hole here lets blood from the left atrium mix with blood in the right atrium. Some atrial septal defect close on their own.

3. Ventricular Septal Defect (VSD)

A Ventricular septal defect is a hole in the part of your septum that separates your heart's lower chambers, or ventricles. If you have a Ventricular septal defect, blood gets pumped back to your lungs instead of to your body. A small Ventricular septal defect may also close on its own. But if yours is larger, you may need surgery to repair it.

4. Tetralogy of Fallout

Sometimes, if you have holes in your heart, or septal defects, you might also have other congenital heart problems. One is called the tetralogy of Fallout, which is a combination of four defects, including:

- A large ventricular septal defect (VSD)
- Thickened wall around your right ventricle, or lower chamber
- Your aorta is located above the hole in your ventricular wall
- Stiff pulmonary valve that prevents blood from flowing easily from the heart to the lungs
- A baby born with tetralogy of Fallout may need to have open heart surgery soon after birth to fix the problems. If the pulmonary valve issue isn't too serious.

5. Patent ductus arteriosus (PDA)

This is a hole in your baby's aorta that doesn't close. During pregnancy, the hole allows

your baby’s blood to bypass his lungs and get oxygen from your umbilical cord. After he’s born, he starts to get oxygen from his own lungs, and the hole has to close. If it doesn’t, it’s called patent ductus arteriosus, or PDA. Small PDAs may get better on their own. A larger one could need surgery.