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COLLEGE: MEDICINE AND HEALTH SCIENCES

DEPARTMENT: PHARMACOLOGY

COURSE CODE: ANA 202

COURSE TITLE: GROSS ANATOMY OF THE THORAX, ABDOMEN, PELVIC & PERINIUM

DATE: 29TH APRIL 2020 – 5TH MAY 2020

ASSIGNMENT: YOU WILL BE PROVIDED WITH A VIDEO, WATCH IT AND USE IT TO DESCRIBE THE HEART AND ITS FUNCTIONS.

WRITE ON FIVE (5) DIFFERENT CONGENITAL ANOMALITIES OF THE HEART

THE HEART

The heart is a muscle that is roughly the size of a human fist. It bulges towards the left while lying behind the sternum. The heart pumps blood to the body through blood vessels, arteries and veins. Arteries carry blood with oxygen and other nutrients throughout the body while the veins take blood back to the heart which pumps it to the lungs to be oxygenated. The heart is divided to four chambers to help in the proper circulation of blood round the body. The first two chambers at the top are called atrial while the two bottom chambers are called ventricles. The atrial collects blood to be received by the ventricles, then pumped to the lungs and the body. The coronary arteries of the heart provides oxygen and nutrients to the heart muscles. The right coronary artery supplies blood to the botton and the back of the heart. The left coronary artery divides into two, one branch supplies blood to the front of the heart while the other branch supplies blood to the left part of the heart. The valves of the heart control the direction of blood flow and they are also responsible for separating the four chambers. There are four valves which are tricuspid, pulmonic, mitral and aortic valves. The tricuspid valve separates the right atrial from the right ventricle, it allows blood from the atrial to flow to the right ventricle but it prevents the backward flow of that blood or it prevents the blood in the right ventricle from flowing back to the right atrial. Blood flows to the lungs through the pulmonic valve. On the left side of the heart, the mitral valve separates the left atrial from the left ventricle. Blood flows to the aorta and the rest of the body through the aortic valve. Blood from the body moves to the right atrial and that marks the beginning of blood circulation. The blood passes to the right ventricle where it is pumped to the lungs to

receive oxygen. Once the blood becomes oxygenated, it flows to the left atrial then passes to the left ventricle from where it is pumped to the aorta and the rest parts of the body. Signals are transmitted through out the heart via an electric system to control its pumping. The electric system starts in the sinoatrial or SA node which is located in the upper portion of the right atrial. The SA node is referred to as the natural pacemaker of the heart. The electric signal passes to the lower chambers of the heart via atrioventricular or AV node which controls the signals so the atrial can tract before the ventricles. In the ventricles, pathways carry the signals throughout the muscles so they can tract at the same time to pump blood to the lungs and throughout the body.

Functions of the heart

- The heart pumps blood to all parts of the body through blood vessels, arteries and veins.
- The blood pumped by the heart supplies the body with oxygen and nutrients.
- The heart receives deoxygenated blood from the right atrium to be passed to the lungs where it will be oxygenated.
- The oxygenated blood is received by the left atrium of the heart and its then pumped to the aorta for it to be circulated round the body.
- The heart removes carbondioxide and other waste from the body.

WRITE ON FIVE (5) DIFFERENT CONGENITAL ANOMALIES OF THE HAERT.

- Septal defect (hole in the heart): This is when a baby is born with a hole in the wall or septum that separates the left and right sides of

his/ her heart. The hole allows blood from the two sides to mix.

- Atrial septal defect(ASD): ASD is an hole in the wall between the upper chambers or the right and left atrial of the heart. A hole there lets blood from the two atrial to mix. Some ASDs close on their own while others require surgery.
- Ventricular septal defect(VSD): A VSD is a hole in the part of your septum that separates the lower chambers of the heart. This causes blood to get pumped to the lungs instead of the body. A small VSD may close on its own while a large one may require surgery.
- Complete atrialventricular canal defect (CAVC): This is the most serious septal defect. It's when there is a hole in the heart that affects all the four-chambers of the heart. A CAVC prevents oxygen-rich blood from going to the right places in the body. It can be repaired by physicians with patches but some people need more than one surgery to treat it.
- Valve defects: Valve controls the flow of blood through the heart ventricles and arteries. Some minor heart defects can involve the valves, these defects include:

  Stenosis: This is when a person's valve become narrow or stiff and it won't be open to allow blood to pass easily.

  Regurgitation: This is when the valves of a person don't close tightly, this allows blood to leak backwards.

  Atresia: This happens when the valve isn't formed right or has no opening to let blood passage. It causes more complicated heart

problems.

Ebstein’s anomaly: This is a defect in the tricuspid valvle in which it keeps it from closing tightly. Babies who have this defect often have arterial septal defect(ASD).

Pulmonary valve stenosis: This is the most common valve defect in new borns. Babies with severe cases often have strained right vantricles. It can be treated with catheter procedure. The procedure is the use of thin tube, with ballon on the end to inflate and stretch open the strained valve.