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PHYSIOLOGY

ANA 202

THE HEART AND ITS FUNCTIONS

The human heart is an organ that pumps blood throughout the body via the circulatory system, supplying oxygen and nutrients to the tissues and removing carbon dioxide and other wastes. It comprises of 4 chambers

a. Right and left atrium
b. Right and left ventricles

Functions of the heart

1. The right atrium receives blood from the veins and pumps it to the right ventricle.
2. The right ventricle receives blood from the right atrium and pumps it to the lungs, where it is loaded with oxygen.
3. The left atrium receives oxygenated blood from the lungs and pumps it to the left ventricle.
4. The right ventricle receives blood from the right atrium and pumps blood to the whole body.

ANOMALES OF THE HEART

1. Aortic dissection- refers to a tear in the inner wall of the aorta. The tear creates two channels for blood flow; one is the normal lumen of the aorta, another is into the wall, where the blood becomes stationary. Blood entering the wall can constrict the aorta lumen, reducing blood flow to the rest of the body.
2. Aortic aneurysm- is a dilation of an artery, which is greater than 50% of the normal diameter. An aortic aneurysm is due to an underlying weakness of the walls (e.g. Marfan's syndrome), or a pathological process (such as aortic dissection). Here, the aorta is ruptured, which if not treated, will lead to death.
3. Dextrocardia-when the embryonic heart tube bends to the left instead of to the right.
4. Ectopia cordis- a rare condition when the heart is in an abnormal location.
5. Right ventricular hypertrophy- when the right ventricle is more muscular than normal.