GREEN GRACE IGBOGI

18/MHS07/021

PHARMACOLOGY

ANA 202 ASSIGNMENT

QUESTION

1. You will be provided with a video, watch it and use it to describe the heart and its functions
2. Write on 5 different congenital anomalies of the heart.
3. THE HEART AND IT’S FUNCTIONS

The heart is a muscle located behind the bone of the left breast. They are four valves in the heart namely: tricuspid, pulmonic, mitral and aortic. There are four Chambers of the heart; the first top two called the Atrium and the bottom two called the Ventricles. 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 is pumped to the lungs to receive oxygen. Once it receives oxygen it flows to the left atrium and the to the left ventricle where it is pumped to the aorta and the rest of the body.

1. Different congenital anomalies of the heart include
2. [Tetralogy of Fallot](https://en.m.wikipedia.org/wiki/Tetralogy_of_Fallot) (ToF)

**Tetralogy of Fallot** (**TOF**) is a [type of heart defect present at birth](https://en.m.wikipedia.org/wiki/Congenital_heart_defect). Symptoms at birth may vary from none to severe Later, there are typically episodes of [bluish color to the skin](https://en.m.wikipedia.org/wiki/Cyanosis) known as cyanosis When affected babies cry or have a [bowel movement](https://en.m.wikipedia.org/wiki/Bowel_movement), they may develop a "tet spell" where they turn very blue, have difficulty breathing, become limp, and occasionally [lose consciousness](https://en.m.wikipedia.org/wiki/Unconsciousness) Other symptoms may include a [heart murmur](https://en.m.wikipedia.org/wiki/Heart_murmur), [finger clubbing](https://en.m.wikipedia.org/wiki/Finger_clubbing), and easy tiring upon [breastfeeding](https://en.m.wikipedia.org/wiki/Breastfeeding).

1. [Total anomalous pulmonary venous connection](https://en.m.wikipedia.org/wiki/Total_anomalous_pulmonary_venous_connection)

**Anomalous pulmonary venous connection** (or **anomalous pulmonary venous drainage** or **anomalous pulmonary venous return** )is a congenital defect of the [pulmonary veins](https://en.m.wikipedia.org/wiki/Pulmonary_vein).

1. [Hypoplastic left heart syndrome](https://en.m.wikipedia.org/wiki/Hypoplastic_left_heart_syndrome) (HLHS)

**Hypoplastic left heart syndrome** (**HLHS**) is a rare [congenital heart defect](https://en.m.wikipedia.org/wiki/Congenital_heart_defect) in which the left side of the heart is severely underdeveloped. It may affect the [left ventricle](https://en.m.wikipedia.org/wiki/Left_ventricle), [aorta](https://en.m.wikipedia.org/wiki/Aorta), [aortic valve](https://en.m.wikipedia.org/wiki/Aortic_valve), or [mitral valve](https://en.m.wikipedia.org/wiki/Mitral_valve)

There is no known cause in the majority of HLHS cases. Some cases may have a genetic component, as HLHS has been shown to be heritable and associated with specific gene mutations.

Not all, but some, cases of aortic stenosis in a fetus can put stress on the left ventricle *in utero,* that can eventually lead to decreased perfusion and stop the growth of the left ventricle.

1. [Transposition of the great arteries](https://en.m.wikipedia.org/wiki/Transposition_of_the_great_arteries) (d-TGA)

**Transposition of the great vessels** (**TGV**) is a group of [congenital](https://en.m.wikipedia.org/wiki/Congenital) [heart defects](https://en.m.wikipedia.org/wiki/Congenital_heart_defect) involving an abnormal spatial arrangement of any of the [great vessels](https://en.m.wikipedia.org/wiki/Great_vessel): [superior](https://en.m.wikipedia.org/wiki/Superior_vena_cava) and/or [inferior](https://en.m.wikipedia.org/wiki/Inferior_vena_cava) [venae cavae](https://en.m.wikipedia.org/wiki/Venae_cavae), [pulmonary artery](https://en.m.wikipedia.org/wiki/Pulmonary_artery), [pulmonary veins](https://en.m.wikipedia.org/wiki/Pulmonary_vein), and [aorta](https://en.m.wikipedia.org/wiki/Aorta). Congenital heart diseases involving only the primary [arteries](https://en.m.wikipedia.org/wiki/Artery) (pulmonary artery and aorta) belong to a sub-group called **transposition of the great arteries**.

[Transposed](https://en.m.wikipedia.org/wiki/Transposition_%28birth_defect%29) vessels can present a large variety of [atriovenous](https://en.wiktionary.org/wiki/atriovenous), [ventriculoarterial](https://en.wiktionary.org/wiki/ventriculoarterial) and/or [arteriovenous](https://en.wiktionary.org/wiki/arteriovenous) [discordance](https://en.wiktionary.org/wiki/discordant). The effects may range from a change in [blood pressure](https://en.m.wikipedia.org/wiki/Blood_pressure) to an interruption in [circulation](https://en.m.wikipedia.org/wiki/Circulatory_system), depending on the nature and degree of the misplacement and which vessels are involved.

Although "transposed" literally means "swapped", many types of TGV involve vessels that are in abnormal positions, while not actually being swapped with each other. The terms TGV and TGA are most commonly used in reference to [dextro-TGA](https://en.m.wikipedia.org/wiki/Dextro-Transposition_of_the_great_arteries%22%20%5Co%20%22Dextro-Transposition%20of%20the%20great%20arteries) – in which the arteries *are* in swapped positions; however, both terms are also commonly used, though to a slightly lesser extent, in reference to [levo-TGA](https://en.m.wikipedia.org/wiki/Levo-Transposition_of_the_great_arteries%22%20%5Co%20%22Levo-Transposition%20of%20the%20great%20arteries) – in which both the arteries and the [ventricles](https://en.m.wikipedia.org/wiki/Ventricle_%28heart%29) are swapped; while other defects in this category are almost never referred to by either of these terms.

1. [Truncus arteriosus (Persistent)](https://en.m.wikipedia.org/wiki/Persistent_truncus_arteriosus)

**Persistent truncus arteriosus** (**PTA**) is a rare form of [congenital heart disease](https://en.m.wikipedia.org/wiki/Congenital_heart_disease) that presents at birth. In this condition, the [embryological](https://en.m.wikipedia.org/wiki/Embryological) structure known as the [truncus arteriosus](https://en.m.wikipedia.org/wiki/Truncus_arteriosus_%28embryology%29) fails to properly divide into the [pulmonary trunk](https://en.m.wikipedia.org/wiki/Pulmonary_trunk) and [aorta](https://en.m.wikipedia.org/wiki/Aorta). This results in one arterial trunk arising from the heart and providing mixed blood to the [coronary arteries](https://en.m.wikipedia.org/wiki/Coronary_arteries), [pulmonary arteries](https://en.m.wikipedia.org/wiki/Pulmonary_arteries), and [systemic circulation](https://en.m.wikipedia.org/wiki/Systemic_circulation)

Most of the time, this defect occurs spontaneously. [Genetic disorders](https://en.m.wikipedia.org/wiki/Genetic_disorders), and [teratogens](https://en.m.wikipedia.org/wiki/Teratogen) (viruses, metabolic imbalance, and industrial or pharmacological agents) have been associated as possible causes. Up to 50% (varies in studies) of cases are associated with [chromosome 22q](https://en.m.wikipedia.org/wiki/Chromosome_22)11 deletions ([DiGeorge Syndrome](https://en.m.wikipedia.org/wiki/DiGeorge_Syndrome%22%20%5Co%20%22DiGeorge%20Syndrome)). The [neural crest](https://en.m.wikipedia.org/wiki/Neural_crest), specifically a population known as the cardiac neural crest, directly contributes to the [aorticopulmonary septum](https://en.m.wikipedia.org/wiki/Aorticopulmonary_septum).