**Mid Term Take Home Examination Submission**

**Clinical Medicine - 1**



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SECTION – A

MCQ’s

**Question-1:**

1. C
2. D
3. D
4. A
5. B
6. D
7. A
8. B
9. B
10. C

SECTION-B

**Question-2:**

Answer:

**Eisenmenger Syndrome:**  Eisenmenger syndrome was first described by Dr. Victor Eisenmenger in 1897.

**Definition:**

Eisenmenger Syndrome occur due to long term untreated congenital heart disease. Especially in VSD, ASD, and Less Commonly in PDA, which cause pulmonary hypertension. In VSD, there is left to right shunt so more blood flow to right ventricular. So, blood volume increases to the lung, which damages the small blood vessel and increases pressure on pulmonary artery, which causes pulmonary vascular disease called Pulmonary Hypertension. So pulmonary artery shows resistance and increase pressure in right ventricular, which cause right ventricular hypertrophy. It increases pressure in the right ventricular, which cause the shunt to reverse from left-to-right to right-to-left, this causes cynosis. Because deoxygenated blood circulated all over the body. So the reversal shunt is called **Eisenmenger Syndrome.** Cynosis occur due to right-to-left shunt. It may cause myocardial infarction or heart failure.

**Diagnosis:**

* ECG
* Cardiac catherization

**Treatment:**

* Balloon Catherization
* Open heart surgery

**Medicines:**

* NSAID’s
* ASPRIN

**Question-03:**

Answer:

**PATENT DUCTUS ARTERIOSUS:** Patent Ductus Arteriosus (PDA) are Condition in which ductus arteriosus does not close.

**Reasons of NSAID Treatment in PDA:** NSAID’s are used for the treatment of PDA, due to the following reasons:

* NSAID’s are given to PDA Patients, because it inhabits cyclooxygenase one & two. Which are the enzymes responsible for the conversion of arachidonic acid to various prostaglandins. Among them prostaglandin E2 is the most potent vasodilator of ductus arteriosus.
* Oxygen delivery and elimination of prostaglandins are essential for the closure of the ductus after birth.
* In fetus life, prostaglandins are potent vasodilator that keep the ductus arteriosus open. When the child born the blood enter to pulmonary circulation, which delivers the prostaglandins to the lung, where they are metabolized and clear. But in PDA it doesn’t metabolized.
* Prostaglandins present in the body doesn’t allow the ductus arteriosus to mature because immature ductus arteriosus are sensitive to prostaglandin E2. So NSAID inhabits the Prostaglandins formation, which makes the ductus arteriosus to mature.
* Indomethacin are the best NSAID used in the treatment of PDA.

That’s why we use NSAID for the treatment of PDA Patients.

**Question-04:**

Answer:

**CORONARY ARTERIES DISEASE:** Coronary artery diseases is a condition, which affects the arteries that supply blood to the heart. It is usually occurred due to atherosclerosis.

**ATHEROSCLEROSIS:** Hardening of the arteries is called atherosclerosis. when plaque is build up inside the arteries walls. This cause the arteries to become narrow and slow down the flow of blood and sometime completely blocked the arteries.

* The wall of arteries is composed of several layers: the outer layer, the middle layer and the inner layer (endothelium). The inner layer (endothelium) is usually smooth.
* **Plaque Formation:** In atherosclerosis the inner layer (endothelium) become injured due to high blood pressure, LDL, diabetes or some other defects.
* So, when the injury occurred, the immune system become activated. The certain white blood cells and T-Cells move out of the blood streams in to the lining of the arteries in to the artery wall. They are transferred in to the foam cell, which collects the fatty materials mainly cholesterols. In this time the smooth muscles move from the middle layer in to the endothelium and multiply there.
* Connective tissue and elastic tissue also accumulate there and so many cellular debris forms. The accumulation of all the cells in the endothelium form a patchy deposit called atheroma or atherosclerotic plaque.
* As the plaque grow, they form around swelling mass goes to the channel of the artery and make the artery narrow or sometimes completely blocks the artery. When atherosclerosis narrows an artery, blood supply to the tissue become low or completely stops. So, tissue starts dying. When it occurs in the coronary arteries it causes heart attack or myocardial infarction.
* Plaque Rupture occur which cause bleeding and clot formation.

**Question-05:**

Answer:

**Classification Of Myocardial Infarction:** The international consensus in 2012 classified myocardial infarction in to five types:

1. **TYPE-1:** In Type-1, A primary coronary event occur, which is related to plaque erosion or plaque rupture and anatomize.
2. **TYPE-2:** Type -2 is related to the Ischemia means restriction in blood supply to tissue causing shortage of oxygen that is need for the cellular metabolism. Which correlates oxygen demand like coronary spasm, embolism, anemia , high or low blood pressure.
3. **TYPE-3:** Type-3 is related to unexpected cardiac death due to sudden loss of blood flow to the heart resulting from the failure of the pump effectively. The symptoms refers to the myocardial infraction, and ECG may be taken or blood clot is found in coronary artery by angiography.
4. **TYPE-4:**  Type-4 is related to coronary angioplasty. A procedure to restore blood flow. It is also associated to pre-cutaneous coronary intervention (PCI) and it is also associated to remove plaque with stunt. When it blocked partially.
5. **TYPE**-**5:** Type- 5 is related to coronary artery by-pass surgery (CABG). It is a surgical procedure to restore normal blood flow to an obstructed coronary artery.

* The Left internal mammary artery used in grafting.

THE END