**NAME : SHOAIB AHMAD.**

**ID NUMBER : 15940.**

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 **QUESTION NO 1.**

 **ANSWER:**

 **CIRCULATING CELLS IN ACUTE INFLAMMATION:**

**The main immune cells involved in acute inflammation are neutrophils, monocytes, eosinophils, lymphocytes, basophils and platelets. The stasis of circulation allows neutrophils to line up along the endothelium near the site injury known as margination. Next they roll along the endothelium sticking intermittently.it is the response of tissue to injury an d is a series of processes initiated to limited damage to tissue.**

 **CHARACTERISTICS OF ACUTE INFLAMMATIO:**

1. **Rapid onset of action. (typically minutes).**
2. **Short in duration (lasts for hours or few days).**
3. **Exudation of fluid and plasma protein (edema).**
4. **Emigration of leukocytes (mainly neutrophils) to the site of injury.**

**QUESTION NO 2.**

**ANSWER:**

 **INFARCTION AND ITS TYPES:**

**Injury or death tissue ( as the heart or lungs) resulting from inadequate blood supply especially as a result of obstruction of the local circulation by a thrombus or embolus. This process of forming is called infarct.**

**CAUSES:**

1. **99% result from arterial occlusion. ( thrombotic or embolic events) .**
2. **Local vasospasm of an atheroma ( hemorrhage within a plaque).**
3. **Traumatic rupture of the blood supply.**

**TYPES:**

 **There are three types of infarction.**

1. **WHITE INTARCTS: White infarction as aslo called anemic infarcts. In this is These tissue are mostly effected by solid organ. the organ typically include single blood supply (no dual arterial blood supply or anastomoses).**
2. **RED INFARCTS: Red infarction generally affect the lungs or other loose organ (testis, ovary and small intestine). The occlusion consist more of red blood cells and fibrin strands. Characteristics of red infarcts include occlusion of a vein.**
3. **SEPTIC INFARCTS: An area of necrosis resulting from vascular obstruction caused by emboli consisting of clumps of bacteria or infected material.**

 **MAST CELL:**

 **A mast cell also known as “mastocyte or a labrocyte” ie a migrant cell of connective tissue that contain many granules rich in histamine and heparin. Mast cell are primary effector cells in immunoglobulin E (IgE) mediated inflammatory reaction. They are implicated in**

* **both acquired and innate immune responses.**
* **Wound healing.**
* **Fibrosis.**
* **Angiogenesis.**
* **Autoimmune diseases.**

**QUESTION NO 3.**

**ANSWER: PROLIFERATIVE CAPACITY:**

**The ability of tissue to repair themselves determine in part by their intrinsic is call proliferative capacity. Tissue of the body divided into three parts.**

1. **Labile: continuously dividing tissue.**
2. **Stable tissue.**
3. **Permanent tissue.**

**CELL HAVING PROLIFERATIVE CAPACITY:**

**STEM CELL: As defined as undifferentiated cell that have the capacity to proliferate and self- renew and to differentiate to one or more types of cell specialized cells. 43 cells isolated from embryos, fetuses or adult tissue.**

 **BENIGN TUMOR: A benign tumor is not a malignant tumor which is cancer. It does not invade nearby tissue or spread to other part of the body the way cancer can. In most cases the outlook with benign tumor is very good. But benign tumor can be serious if they press on vital structure such as blood vessels or nerves. Therefore sometimes they required treatment and sometimes they do not.**

 **CHARACTERISTICS OF BENIGN TUMOR:**

1. **Benign tumor are microscopic and gross characteristics.**
2. **Innocent.**
3. **Localized.**
4. **Cannot spread to the other sites.**
5. **Easy for surgical.**
6. **Survival of patients is fair.**
7. **But in certain tumors it can be serious.**

**QUESTION NO 4.**

 **HYPOVOLUMIC SHOCK: Hypovolemic shock is an emergency condition in which severe blood or other fluid loss makes the heart unable to pump enough blood to the body. This type of shock can many organ to stop working.**

**there are two conditions.**

**CONDITIONS:**

1. **NON- HEMORRHAGIC: In this condition vomiting, diarrhea, bowel obstruction, pancreatic, burns and dehydration such types of diseases can caused.**
2. **HEMORRHAGIC: In this type of condition GI bleed, trauma, massive hemoptysis, AAA rupture, ectopic pregnancy, post- partum bleeding diseases can caused.**

**QUESTION NO 5.**

**ANSWER:**

 **EDEMA: Edema is swelling caused by excess fluid trapped in your body tissues, although edema can affect any part of your body you may notice it more in your hand, arms feet ankles and legs.**

**TYPES OF EDEMA: There four types of edema.**

1. **DEPENDENT EDEMA: Start from swelling of legs. Stocks / sup vena cava syndrome caused by bronchogenic tumor which compressed superior vena cava due to its obstruction no blood passage and caused edema in face, neck and upper extermities.**
2. **RENAL EDEMA: The edema associated with kidneys diseases usually occurs in your legs and around your eyes. Renal failure, nephrotic severe, generalized, depend loose connective tissue, subcutaneous tissue,and visceral organs.**
3. **PITTING EDEMA: It is swelling in the body caused by excess fluid. It often affects lower such legs, feet and ankles .but it can occurs anywhere. If you press on a swollen area and an indentation or pit remains, this is called pitting edema.**
4. **PULMONARY EDEMA: Pulmonary edema is an abnormal buildup of fluid in the lugs. This buildup of leads to shortness of breath. mostly it occurs in the left ventricular failure side.**

 **CLASSIFICATION OF THROMBOSIS:**

1. **DEEP VEIN THROMBOSIS: This type of thrombosis commonly occurs in the formation of blood clot in the femoral vein of legs. symptoms may include swelling, pain, and tenderness often in the legs. Risk factor include immobility, hormone therapy and pregnancy.**
2. **PORTAL VEIN THROMBOSIS: is the blockage or narrowing of the portal vein (the blood vessel that bring blood to liver from the intestines) by blood clot. Most people have no symptoms but in the some people fluid accumulates in the abdomen, the spleen enlarge and sever bleeding occurs in the esophagus.**
3. **JUGULAR VEIN THROMBOSIS: Is extremely rare type of venous thrombosis that usually occurs as a result of intravenous drug use but is also associated with infection and malignancy.**
4. **RENAL VEIN THROMBOSIS: The vein can also be obstructed by a thrombus which can result in reduced kidney drainage. This type is known as renal vein thrombosis.**