

NAME : ITIZAZ HASSAN

ID : 16662

DEPARTMENT : BS MLT

SEMESTER : 2

SECTION : A

QN05: What is Edema? Explain its types also write about the Classification of Thrombosis.

ANSWER ::

EDEMA ::

- ❖ It is the abnormal condition of a body which is the excess amount of fluid in the interstitial tissue spaces is called edema.
- ❖ In edema in the subcutaneous tissue the swelling occurs.
- ❖ EDEMA is the swelling which is caused by the increase extra fluid in the interstitial space. It usually happens in feet, ankle, legs, but also involves the entire body.
- ❖ Edema also happens when the circulation of blood to the heart is restricted.
- ❖ In this condition the fluid and blood back up and leak into the surrounding tissue.
- ❖ When they leak out of the capillaries they get into the surrounding tissues which get swollen due to the extra cellular fluid.

Sign of Edema:

- ❖ Swelling
- ❖ Skin that holds a dimple or pit after being held or pressed.
- ❖ Sudden weight gain.
- ❖ Shiny skin
- ❖ Enlarged abdomen.

Types of Edema ::

1. Dependent Edema :

It is the condition in which one part of the heart fails, especially the right ventricle of the heart.

2. Renal Edema :

In this type the renal does not work properly or renal dysfunction occurs and also this type is more dangerous even more than cardiac edema because it affects all parts of the body equally.

3. Pitting Edema :

In this type of edema there is a great pressure over substantially edematous subcutaneous tissue, because the tissue displaces the interstitial fluid and leaves a finger-shaped depression.

4. Pulmonary Edema :

In this type of edema the left ventricle of the heart does not work means mostly the left ventricle failure.

Thrombosis :

It is a process involving the formation of clot in the blood-stream.

Classification of Thrombosis :

There are two broad Classification of Thrombosis.

- ❖ **Venous Thrombosis :**
When the clot developed in the veins.
- ❖ **Arterial Thrombosis :**
When the clot developed in the artery.

QNO4 : What is hypovolumic shock? Explain along with its conditions.

ANSWER :

SHOCK:

It is state of physical shutdown. In this condition there is not enough circulating blood. It can causes failure to many organ. It may lead heat attack or heart failure and may be lead to death.

Hypovolumic Shock:

It is a type of shock in which severe bleeding or body fluid are loss from trauma, burns, surgery, or dehydration from severe nausea and vomiting.

In this kind the blood pressure is decreased due to which the flow of blood to the cell, tissue and organ is reduced.

The reduce in blood circulation may lead to heart failure or cardiac output.

Conditions of Hypovolumic Shock :

There are two conditions :

1. Hemorrhagic
2. Non-hemorrhagic

1: Hemorrhagic :

Bleeding, also called Hemorrhagic, is the name used to describe blood loss. It can refer to blood loss inside the body called internal bleeding, or to blood loss outside of the body called external bleeding. Blood loss can occur almost in any area of the body.

Hemorrhagic may lead to ;

- ❖ GI bleed
- ❖ Trauma
- ❖ Massive hemoptysis
- ❖ AAA rupture

- ❖ Ectopic pregnancy, post-partum bleeding.

2: Non-hemorrhagic :

It is also called ischemic infarction, it is the result of the acute interruption of blood flow to an area within the brain. The usual cause for a Non-hemorrhagic infarction is the occlusion of an intracranial artery by a thromboembolism.

Non-hemorrhagic may lead to :

- ❖ Vomiting
- ❖ Diarrhea
- ❖ Bowel obstruction, pancreatitis
- ❖ Burns
- ❖ Environmental (dehydration)

QNO1 : What are the circulating cells in acute inflammation? Also write the characteristics of acute information.

ANSWER :

Acute inflammation :

It is a short term process occurring in response to tissue injury, usually appearing within minutes or hours. It is characterized by five ordinary pain ;

- ❖ Pain
- ❖ Redness
- ❖ Immobility (loss of function)
- ❖ Swelling and heat.

Circulating cell in acute inflammation :

- ❖ Neutrophils
- ❖ Monocytes
- ❖ Eosinophilic
- ❖ Basophilic
- ❖ Platelets

Characteristics of acute inflammation :

- ❖ Formation of inflammatory exudate.
- ❖ Short duration
- ❖ Predominately Neutrophils
- ❖ Leukocytes accumulation.
- ❖ Lasting from a few minutes up to a few days.

QNO3: Which are the cells having proliferative capacity? Explain them, also write about the characteristics of benign tumor.

ANSWER :

Cell having proliferative capacity :

- a. Labile cell
- b. Stable cell
- c. Permanent cell

A: Labile cell:

These cells continuously divide, these are proliferative throughout life and replacing those cells that are continuously dying.

Example:

- ❖ Squamous stratified epithelium cells of skin, oral cavity, vagina and cervix.
- ❖ Columnar epithelium of GIT, uterus and fallopian tubes.
- ❖ Hematopoietic mean blood forming cell of the bone marrow.

B: Stable cells (quiescent cells) :

- ❖ These cells have ability to regenerate but in normal condition do not actively replicate. However they can undergo rapid division in response to a variety of stimulus or activation if a stimulus.
- ❖ Low proliferating ability.
- ❖ Regeneration can occur in labile cells and stable cells.

Examples :

- ❖ Paranchymal cells of liver, kidney and pancreas.
- ❖ Mesenchymal cells, e. g smooth muscle, cartilage, connective tissue, fibroblasts and vascular endothelial cells.

C: Non dividing cells (permanent cells):

These cells are incapable of division and Regeneration. If they are destroyed, or loss is permanent and repair occurs only by the proliferation of connective tissue (scar formation)

Example:

- ❖ Nerve cell (neuron)
- ❖ Cardiac muscle.
- ❖ Skeletal muscle
- ❖ Regeneration and repair also depends on extent of injury and also on inflammation.

Characteristics of benign tumor :

- I. Cells resemble normal cells and tumor architecture resembles that of the mature organ.
 - ❖ Homologous by appearance, to architecture, color, consistence.
- II. Usually are spherical and compress the surrounding tissue (giving rise to the appearance of a capsule)
 - ❖ Expansive type of growth.
- III. Grow slowly and have few mitotic figures only tissue atypism.

IV. Never give metastasis and relapses.

QNO2 : Write a note on infraction and its types and write a note on Mast cells.

ANSWER :

Infraction :

- ❖ The formation of localized area of ischemic necrosis within a tissue or organ due to impaired arterial supply or the venous drainage.
- ❖ The necrosis area is called infarct.
- ❖ It is extremely important cause of clinical illness are :
- ❖ Myocardiac infraction
- ❖ Cerebral infection.

Causes :

- ❖ Occlusion of arterial supply or Venous drainage like: Thrombosis, embolism, athetmanous plaques, external compression
- ❖ Functional spasm of arteriole
- ❖ Traumatic rupture of the artery.

Types :

1: White infarcts

2: Red infracts

3: Septic infarcts

1: White Infarction :

- ❖ Arterial occlusion
- ❖ Solid, compact organs
- ❖ Few collateral circulation to spleen, kidney, heart, brain etc.
- ❖ Morphology
- ❖ Gross
- ❖ Dull pale, dry, wedge-shaped necrotic lesion
- ❖ A Hemorrhagic zone surroundings.

2: Red infraction :

- ❖ Arterial occlusion
- ❖ Venous occlusion
- ❖ Loose tissue
- ❖ Dual circulations: lung, small intestine
- ❖ Example : brain infarction.

3: Septic infraction :

- ❖ Bacteria containing emboli

- ❖ May form abscess and pus.

Factors influencing development of an infarct.

- ❖ Nature of the vascular supply.
- ❖ Rate of development of occlusion
- ❖ Vulnerability to hypoxia
- ❖ Oxygen content of blood.

MAST CELLS

- ❖ A mast cell is also known as a mastocyte or a labrocyte.
- ❖ It is a migrant cell of connective tissue that contains many granules rich in histamine and heparin.
- ❖ Specifically, it is a type of granulocyte derived from the myeloid stem cell that is a part of the immune and neuroimmune system s.

THANK YOU

THE END.