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SEMESTER: 2nd

÷= Q No:1 circulating cell in acute inflammation?

- 1. Neutrophils*
- 2. Monocytes*
- 3. Eosinophilic*
- 4. Lymphocytes*
- 5. Basophilic*
- 6. Platelets*

= characteristics of acute inflammation

- Short duration*
- Lasting from a few minutes up to a few days*

- *Formation of inflammatory exudate*
- *Predominately neutrophils leukocytes accumulation.*

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÷= Q No:2 infarction and its types

(infarction) the formation of a localized area of ischemic necrosis with in tissue of organs due to impaired arterial supply or the venous drainage .

The necrosis area is called “ infarct.

An extremely important causes of clinical illness

- *Myocardial infarction*
- *Cerebral infarction*

^^^ types

1. White infarction

- *Arterial occlusion*
- *Solid compact organs*

- *Few collateral circulation (spleen, kidney, heart, brain etc.*
- **Morphology**
- **Gross**
- *Dull pall , dry, wedge shaped necrotic lesion*
- *Hemorrhagic zoon surrounding*

2. Red infarction

- *Arterial occlusion*
- *Venous occlusion*
- *Loose tissue*
- *Dual circulation: lung, small intestine*

Example: brain infarction (liquefied necrosis

3. Septic infarction

- *Bacteria containing emboli*
- *May from abscess and pus.*

(mast cells)

- *Found in both acute and chronic inflammation.*
- *Expresses surface receptor that binds to fc portion IGE .(when certain antigen binds with IGE) .*
- *The mast cells degranulate release histamine.*
- *Granules release histamine and prostaglandins during allergic reactions to food, insects venom , or drugs, sometimes with catastrophic results (e.g anaphylactic shock) .*

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÷= Q No:3 the cells having proliferating capacity?

1. **Labile cells:** *Continuously dividing cells, these are proliferative through*

out 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 cells of bone marrow.*

2. **Stable cells:** *this cells have ability to regenerate but in normal conditions don't actively replicate. However they can undergo rapid divisions in response to a variety of stimulus or activation 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 tissues, fibroblasts and vascular endothelial cells.*

3. ***Permanent cells:*** *these cells are capable of divisions and Regeneration. If they are destroyed, the loss is permanent and repair occurs only by the proliferation of connective tissues (scar formation)*

Example: 1. Nerve cells (neuron)

2. Cardiac muscle

3. Skeletal muscle

4. Regeneration and repair also depends on extent of injury and also on inflammation

Steps of repair:

- *Formation of translation tissue*
- *Wound contraction*

Characteristics of benign tumour

- *Well differentiated*
- *Low mitosis*
- *No necrosis*
- *Slow growing*
- *Well demarcated*
- *Encapsulated*
- *Do not infiltrate or metastasis*
- *May not recurrence*
- *Low dysplasia.*

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÷= Q No:4 hypovolumic shock

The severe bleeding or loss of body fluids from trauma, burns, surgery or dehydration from severe nausea and vomiting. Blood pressure decreases, thus blood flow is reduced to cell, tissue and organs.

- **Condition**

1. Hemorrhagic

- GI bleed
- Trauma
- Massive hemoptysis
- AAA rupture
- Ectopic pregnancy, post- partum bleeding

2. Non- Hemorrhagic

- Vomiting
- Diarrhea
- Bowel obstruction, pancreatitis
- Burns
- Environmental dehydration

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÷= Q No:5

Edema: Abnormal and excess amount of fluid in the interstitial tissue spaces is called edema

- *Fluid collections in different body cavities may have various designations*
- *Hydrothorax*
- *Hydropericarium*
- *Hydroperitonium*
- *Anarsarca is severe, extreme generalized edema with profound subcutaneous tissue swelling.*

Edema types

1. ***Dependent edema:*** *prominent feature of congestive heart failure, particularly of the right ventricle.*
2. ***Renal edema:*** *edema as a result of renal dysfunction or nephrotic syndrome is generally more severe than cardiac edema and affects all parts of the body equally.*
3. ***Pitting edema:*** *finger pressure over substantially subcutaneous tissue*

displaces the interstitial fluid and leaves a finger-shaped depression.

4. ***Pulmonary edema:*** *most typically seen in the setting of left ventricular failure.*

1. *Venous thrombosis*

- *Deep vein thrombosis*
- *Portal vein thrombosis*
- *Renal vein thrombosis*
- *Jugular vein thrombosis*
- *Budd-chiari syndrome*
- *Paget-schoetter disease*
- *Cerebral venous sinus thrombosis*

2. *Arterial thrombosis*

- *Stroke*
- *Myocardial infarction*
- *Other sites*

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