Quiz 1. Questions

Disorders of thermoregulation

1. Hypothermia: definition, causes, pathophysiology, stages, clinical aspects.

2. Hyperthermia: definition, causes, pathophysiology, stages, clinical aspects.

3. Heat stroke, sunstroke. Definition, etiology, pathogenesis. Phases, clinical aspects.

4. Fever. Definition, classification, role in diagnosis of disease. Pyrogens: derivation, types and mechanisms.

5. Fever stages. Thermoregulation at the different stages of fever. Metabolism and physiological functions' changes in the fever. Types of fever. Fever curves. Biological purpose of fever.

6. Purpose of fever. Differences between fever and hyperthermia. Principle of antipyretic therapy.

Cell injury

1. Cell injury: causes, types, stages (paranecrosis, necrobiosis and necrosis). Specific and unspecific manifestations of injury.

2. Apoptosis: definition, causes, types, pathways, stages. Purpose of apoptosis in physiological and pathological conditions.

3. Mechanisms of cell injury. Depletion of ATP, membrane damage, oxidative stress, ions (potassium, calcium, sodium) and fluid imbalance.

4. Defensive and adaptive mechanisms in cell injury. Cellular and subcellular adaptation.

Hemodynamic disorders

1. Arterial hyperemia: definition, causes, signs, mechanisms. Features of microcirculation, outcomes and consequences of arterial hyperemia.

2. Venous hyperemia: definition, causes, signs, mechanisms. Features of microcirculation, consequences of venous hyperemia. Background for therapeutic approach.

3. Stasis: definition. Causes and mechanisms, consequences for organism. Collateral circulation and its purpose.

4. Thrombosis: definition. Blood clot formation factors, mechanisms of thrombosis. Virchow's triad. Types of the thrombi. Thrombosis outcomes.

5. Embolism. Definition, etiology, mechanisms of emboli formation. Types of embolisms. Mechanisms of disturbances in embolism.

6. Hemorrhage: definition, types. Compensatory and adaptive, pathological reactions in hemorrhage. Methods of hemostasis.

7. Edemas. Definition, classification, mechanisms. Clinical types of edemas.

Inflammation

1. Inflammation: definition, etiology. Components of inflammatory process. Systemic and local signs of inflammation.

2. Primary and secondary alteration in inflammation. Metabolism changes, pathochemical and physicochemical changes in the focus of inflammation.

3. Mediators of inflammation. Their types, derivation. Role in the secondary alteration's development and dynamics of inflammatory process.

4. Leukocytes migration in inflammation, mechanisms, chemotaxis factors.

5. Vascular reactions in acute inflammation. Blood flow changes, phases and mechanisms.

6. Exudation. Mechanisms of inflammatory edema's development. Types and contents of exudates.

7. Acute phase response. Interrelation of local and systemic reactions on injury. Manifestations of acute phase response. Acute phase proteins and mediators; their derivation and biological effects.

Acid-base imbalance. Disorders of water metabolism

1. Types of water metabolism disorders. Hypohydration: types, etiology, pathogenesis.

2. Types of water metabolism disorders. Hyperhydration: types, etiology, pathogenesis.

3. Acid-base balance parameters. Types of acid-base imbalance. Classification of acid-base balance disorders.

4. Respiratory acid-base disorders. Respiratory acidosis (acute, chronic). Diagnostic criteria, causes, symptoms.

5. Respiratory acid-base disorders. Respiratory alkalosis (acute, chronic). Diagnostic criteria, causes, symptoms.

6. Metabolic acid-base disorders. Metabolic acidosis (acute, chronic). Diagnostic criteria, causes, symptoms.

7. Metabolic acid-base disorders. Metabolic alkalosis (acute, chronic). Diagnostic criteria, causes, symptoms.