

OF THE NORTH-OSSETIAN STATE
MEDICAL ACADEMY OF MINZDRAV OF RUSSIA

DEPARTMENT OF PATHOLOGICAL PHYSIOLOGY

Glossary

INTRODUCTION

THE SUBJECT AND OBJECTIVES OF GENERAL PATHOLOGY (PATHOPHYSIOLOGY)

Modeling of the disease is the main and specific method of pathophysiology, which allows to actively study all stages of the disease development during its reproduction in an experimental animal. The main pathophysiological method of disease modeling is an experiment.

General pathology is an integrated science that combines modern data on pathophysiology, pathomorphology and pathochemistry of pathological processes and diseases, studying the most common patterns of their occurrence, course and outcome.

Pathophysiology - the main part of the General pathology, fundamental and integrative science, as well as academic discipline, studying the General laws of the beginning, development and outcome of the disease,

- General-an integral part of pathophysiology, studying the causes and mechanisms of development of typical pathological processes.

- private-an integral part of pathophysiology, studying the General laws of the violation of the function of organs and systems (eg, kidneys), compensatory possibilities of the body in a certain pathology.

Typical pathological processes-a constant combination and combination of pathological reactions and processes, formed and fixed in evolution as a complex response of the body to the pathogenic effects of external or internal factors. These include inflammation, fever, allergies, etc.

Experiment in pathophysiology-purposeful activity of the researcher, undertaken for the purpose of scientific knowledge, the discovery of objective laws of the disease under the influence of damaging factors on the body of an experimental animal or process.

GENERAL NOSOLOGY

GENERAL ETIOLOGY AND PATHOGENESIS. PATHOGENIC ACTION OF FACTORS OF THE EXTERNAL ENVIRONMENT ON THE BODY. HYPOXIAS

Disease - a violation of the body under the influence of extreme stimuli of the environment, characterized by a decrease in adaptability while mobilizing the body's defenses (according to I. R. Petrov).

Diseases of civilization-diseases in the etiology and pathogenesis of which the main role is played by the adverse effects of scientific and technological progress, mainly psychogenic or industrial character.

Altitude sickness is a disease that occurs when you quickly climb to a height in a leaky aircraft.

Hyperbarium-finding (impact) in an environment with high barometric pressure

Hypercapnia is an increase in the content of carbon dioxide (pCO₂) in the blood.

Hyperoxia-excess oxygen in the body, which is, for example, in a state of hyperbaria.

Hypoxemia-reduction of oxygen content (pO₂) in the blood.

Hypoxia - oxygen starvation of tissues as a result of violations of oxygen delivery to tissues, and its use in them.

- hemic-oxygen starvation of tissues, characterized by a decrease in hemo-globin and red blood cells in the blood and a decrease in the oxygen capacity of the blood.

- hypoxic-oxygen starvation of tissues that occurs when there is insufficient oxygen content in the inhaled air.

- respiratory-oxygen starvation of tissues that occurs in violation of the external breathing apparatus.

- tissue-oxygen starvation of tissues that occurs as a result of violation of oxygen use by tissues.

- circulatory-oxygen starvation of tissues that occurs as a result of absolute or relative circulatory failure.

Mountain sickness is a disease that occurs in a person with a slow rise to a height without an oxygen device.

Health - the state of the body, which is marked by the correspondence of structure and function, as well as the ability of regulatory systems to maintain the constancy of the internal environment (homeostasis). WHO (1946) adopted the following definition of health: "Health is a state of complete physical, psychological and social well-being, not merely the absence of disease or infirmity".

Caisson disease is a disease that occurs during the transition from the area of high barometric pressure to the area of normal atmospheric pressure.

Conditionalism is a direction in the doctrine of etiology, which states that the disease develops under the influence of a combination of a number of equivalent conditions.

Radiation sickness-a symptom of a violation of the function of hematopoiesis, nervous and endocrine systems as a result of total ionizing radiation.

- acute-after a single irradiation (absorption dose of at least 0.8 Gy).

- chronic-a consequence of repeated exposure to small doses of ionizing radiation, usually intracorporally.

Monocausality is a direction in the doctrine of etiology, which states that the disease develops from the impact of any one reason.

Nosology-the doctrine of the disease, the main category of medicine.

Norm is a medical category, as a set of biochemical, functional and morphological properties of the organism, expressing the optimal realization of the species genotype in specific environmental conditions.

Pathogenesis-the study of the mechanisms of occurrence, development and outcome of the disease.

Pathological process-a natural sequence of phenomena that occur in the body under the action of a pathogenic factor, leading to a violation of the normal course of life processes and the emergence of protective and adaptive reactions.

Pathological condition-a persistent deviation from the norm, which has a biologically negative value for the body.

The pathological reaction is inadequate or biologically inexpedient answer of organism or its separate systems exposed to normal or pathological stimuli.

The vicious circle of pathogenesis is a special form of relationship between the mechanisms of pathology development, when the primary disorders that arise under the influence of the damaging factor can themselves cause secondary disorders that enhance the initial changes.

Pre-disease-the probability of the disease realized by the body, which is due to the influence of external factors and a decrease in adaptive (adaptive) mechanisms.

Psychosomatic-1. section of General pathology, studying the influence of mental factors on the occurrence and course of somatic diseases; 2. a term used to refer to a group of somatic diseases whose etiology could be related to emotional factors.

Radiolysis - ionization of water molecules of cytoplasm and intercellular space, which is the primary pathological effect of ionizing radiation in biological objects.

Radiotoxins are mediating agents of the damaging effect of ionizing radiation formed as a result of endogenous formation of secondary toxic products of protein-lipid origin.

Saturation - increasing the solubility of gases in liquid media. For biological objects saturation of oxygen, nitrogen and other air components in blood, lymph and other body fluids in hyperbaria.

The theory of "factors" - a kind of conditioning, claiming that the disease occurs as a result of the combined effects of many equivalent factors (risk factors).

Risk factors - a set of external and internal adverse effects on the body, which can lead to the development of a certain pathological process (eg, atherosclerosis). These include not only the causes and conditions of the disease, but also the individual links of pathogenesis.

Electrolysis is the displacement of ions and changes in their concentration in cell membranes under the influence of pathogenic electrochemical action of current.

Etiology-the study of the causes and conditions of the disease.

REACTIVITY AND RESISTANCE OF ORGANISM

Apoptosis-programmed morphological and biochemical mechanisms of cell death of Mature organism tissue.

Asthenia-a condition characterized by General adynamia, lability vascular reactions, often noted omission of internal organs.

Hyperedge - increased reactivity.

Hypo-reduced reactivity.

Diathesis is a kind of anomaly of constitutional features, characterized by a pathological reaction of the body to physiological and pathological stimuli.

Discharge - a perverse, unusual reactivity. The Constitution is a single complex of sufficiently stable morphological, functional, including psychical, essential features of the organism, which determine its reactivity and have been formed on a hereditary basis under the influence of environmental factors. Reactivity - a property of the organism to answer with changes of vital activity on exposure to the ordinary stimuli of the environment.

- species-is determined by hereditary factors and expresses the ability of all representatives of this species to respond to different impacts of the same type of changes in life.

- individual-on the basis of hereditary factors, a specific action of the individual on the effects of the environment is formed and depends on the age, sex, nutrition and other conditions in which the body develops.

nonspecific-the ability to respond to the same stereotypical reactions to various environmental factors.

- pathological-occurs under the action of pathogenic environmental factors on the body, characterized by a decrease or unusual development of adaptive reactions of the body. It leads to the restriction of his life and the emergence of disability.

- specific-the ability to form antibodies to antigenic stimuli and depends on the function of the immune system of the body.

Resistance-the body's resistance to pathogenic factors.

- active-ability to counteract pathogenic effects due to the inclusion of protective and adaptive mechanisms.

Chronopathology-a section of General pathology, studying the violation of the course of life processes in time - biological rhythms, onto - and phylogenesis.

THE ROLE OF HEREDITY IN PATHOLOGY

Alkaptonuria - an inherited disorder of amino acid metabolism (delay the oxidation of tyrosine under transformation a consequence of acid in malelotok-susnow acid). Connective tissue and joint damage.

Amplification-increasing the number of copies of individual genes (not the entire genome).

Aneuploidy is a change in the number of chromosomes in a diploid set.

Arachnodactyly (Marfan syndrome) is an autosomal dominant disease with a foam-trance of 30 %, characterized by skeletal abnormalities: long, thin limbs, very long, flexible (arachnoid) fingers. There are multiple metabolic disorders, dislocation of the lens of the eye.

Achondroplasia is an autosomal dominant disease. Is characterized by dwarf growth (disproportionately short limbs with normal development of the body, the holo-you).

Brachydactyly - kordopati, is inherited in an autosomal landmarks of the type.

Congenital diseases are diseases that appear from the moment of birth of a child. May be hereditary or non-hereditary - as a result of exposure to pathogenic factors on the embryo.

Gene drift is a change in the gene pool of a population caused by random causes, random redistribution of genes.

Galactosemia is an autosomal recessive disease of carbohydrate metabolism. Is characterized by the inability to use galactose as a result of the low activity of the enzyme galactose-1-phosphate uridylyltransferase. It is manifested by dementia, hypoglycemia, cirrhosis of the liver, cataracts, etc.

Hemophilia A and B - a group of molecular hereditary diseases linked to the floor (with X-chromosome). It is characterized by insufficiency of blood clotting factors (VIII and IX) Clinically - blood clotting disorders.

Genocopies are genetically heterogeneous hereditary diseases with a similar clinical picture.

Hypertrichosis is inherited as a trait, sex-linked (Y-chromosome). Identified is excessive owolosenie (for example, at the edge of the ear).

Deletions-loss of one of the internal parts of the chromosome.

Duplication - doubling of individual sections of chromosomes.

Isolates are populations in which the principle of panmixia is not observed as a result of a combination of circumstances (ethnic, religious, geographical, etc.).

Inbreeding-crossing between related individuals.

Inversion - the rearrangement of plots within a single chromosome.

Letal (lethal mutation) - mutation, distorting the important parts, chromo som, causing disturbances or impairments incompatible with life. Recessive lethal causes death. Homozygous for this gene.

Mosaicism is the formation of several cell lines in the body.

Mutagens are environmental factors that can cause mutations when exposed to the body.

Mutations are quantitative or qualitative changes in the genotype of an organism, transmitted in the process of genome replication from cell to cell and from generation to generation.

Hereditary disease-a violation of the life of the body as a result of changes in the genetic code transmitted by parents.

Incomplete domination - the interaction of two alleles, giving an intermediate effect in heterozygote (example - sickle cell anemia).

Panmixia - accidental crossbreeding without selection in a population.

The penetrance - the frequency of occurrence of the gene.

Pleiotropy - the ability of a gene to influence simultaneously on multiple signs of the body.

Gout is a hereditary disease of purine bases exchange, inherited by the dominant type, characterized by an increase in the blood of patients with uric acid (hyperuricemia), followed by joint damage.

Down syndrome is a chromosomal disease (trisomy for 21 autosomes, occurs as a result of non-divergence of 21 chromosomes in meiosis). Characterized by mental retardation, multiple malformations.

- X-trisomy is a chromosomal condition (polysemy along the X or (and) chromosome) resulting from chromosome failure in meiosis (male phenotype).

- Turner's — a chromosomal condition (monosomy X-chromosome), arising as a result of non-divergence in meiosis (female phenotype). Violations of physical and mental development.

Translocation - the exchange of sites between homologous and non-homologous chromo-som.

Phenylketonuria is an autosomal recessive molecular disease. It is characterized by the inability to convert phenylalanine to tyrosine as a result of insufficient activity of the enzyme

phenylalanine hydroxylase. Manifests itself dementia, seizures, signs of albinism, multiple malformations.

Phenocopies are non-hereditary congenital or acquired in early childhood diseases different in etiology, but similar in clinical manifestations to hereditary diseases.

Expressiveness is a property of the mutant gene that determines the severity of clinical symptoms, the severity of the disease.

TYPICAL PATHOLOGICAL PROCESSES

PATHOPHYSIOLOGY OF PERIPHERAL BLOOD CIRCULATION AND MICROCIRCULATION

Vasodilation - the expansion of the lumen of the vessels, due to the relaxation of their smooth muscles.

Vasoconstriction-narrowing of the lumen of the vessels, due to the reduction of their smooth muscles.

Hyperemia-excessive blood vessel overflow of any area of tissue or organ.

- arterial-an increase in blood filling of an organ or tissue due to increased inflow and with a corresponding increased outflow of blood.

-----vakatnoe - the kind of arterial hyperemia that develops in a place where previously, there was a sparse space (medical banks).

-----mioparalitichesky - the kind of arterial hyperemia, the main mechanism of development of which is the action of Exo - or endogenous chemical substances on the smooth muscle of microvessels.

----- neuroparalytic-a type of arterial hyperemia, the main mechanism of which is to reduce the tone of the muscle fibers of arterioles due to a decrease or complete cessation of sympathetic impul-sation.

----- neurotonic-a type of arterial hyperemia, the main mechanism of which is to reduce the tone of the muscle fibers of arterioles due to increased parasympathetic effector effects.

Venous hyperemia - increase in blood supply to the organ or tissue after the result of the complicated outflow of blood.

Infarction is an acute process in connection with the persistent cessation of blood supply through the feeding arteries and leading to tissue necrosis. The organs are most often subjected to a heart attack-the heart, kidneys, spleen, lungs, brain, retina.

Ischemia-reduction or cessation of blood supply to an organ or tissue due to impaired blood flow.

Microcirculation - the ordered movement of blood and lymph through microvessels, transcapillary exchange of oxygen, carbon dioxide, substrates and products of metabolisms, ions, biologically active substances, as well as the movement of fluid in the extravascular space.

Necrobiosis - the process of changes in the cell or tissue prior to its death, in contrast to necrosis-reversible state in the elimination of pathogenic factors.

Necrosis - mortification of a part of tissues.

The plethora - plethora, will increase the total amount of blood.

Sludge-phenomenon - reduced suspension stability, agglutination and agglutination of blood elements, leading to a violation of microcirculation.

Stasis is a local stop of blood flow in the microcirculatory bed, most often in the capillaries.

Transcapillary exchange-exchange between the capillary and surrounding tissues.

Thrombosis is the process of intravital blood clotting on the wall of arteries or veins.

Cyanosis is a cyanotic shade of tissues and organs due to the increase in the amount of venous blood and the increased content of restored hemoglobin in it.

Embolism - the process of transferring and blockage of blood and lymphatic vessels, particles entered the blood or lymph and not usually found in the blood.

Emboli-particles carried with the flow of blood or lymph, not found in normal physiological conditions.

INFLAMMATION

Alteration-damage that occurs under the influence of both phlogogenic stimulus (cm) and endogenous factors formed during inflammation.

- primary-tissue damage that occurs and the response to direct exposure to the phlogogenic factor.

- secondary-damage as a result of the action of a complex of metabolic, physical, chemical and structural and functional disorders in the focus of inflammation, which become factors of damage.

Acute phase proteins are positive globulins with different functions (immunomodulators, chemoattractants, bacteriocidal proteins, opsonins, etc.) formed in the liver during the acute period of inflammation.

Inflammation is a typical pathological process that occurs when tissues are damaged and manifests itself as a violation of blood circulation, changes in blood and connective tissue in the form of alteration, exudation and proliferation.

- alterative - inflammation in which the predominant damage, dystrophy, necrosis.

- exudative-inflammation characterized by severe circulatory disorders with the phenomena of exudation and emigration of leukocytes.

- proliferative (productive) inflammation, characterized by the fact that it is dominated by the multiplication of cells and gestagenogo hematogenous origin.

Interleukins-biologically active substances of peptide nature, formed by phagocytes, mainly macrophages, in the development of adaptive reactions of the body to damage (IL-1, IL-2, IL-6, etc.).

Chalons - substances that control cell proliferation, inhibiting cell de-tion.

Kinins are a group of vasoactive polypeptides formed in the blood during a cascade of biochemical reactions from inactive factors. The main kinik is bradykinin.

Leukotrienes are biologically active substances that are formed during the lipo-oxygenase pathway of splitting arachidonic acid. They belong to the mediators of inflammation and other pathological processes.

Lymphokines - substances of protein nature, formed in lymphocytes, belong to the mediators of inflammation.

Macrophages - cells of the system of phagocytic mononuclear cells (circulating - monority blood and fixed (tissue) macrophages: Kupffer cells of the liver, matangi-cial cells of the kidneys, glial cells in the Central nervous system, etc. to absorb large particles, including cells and debris.

Marginalization-the phenomenon of marginal (parietal) standing leukocytes at the inner surface of the capillary endothelium during the release of white blood cells from the vessels in the inflamed tissue.

Inflammatory mediators are a complex of physiologically active substances that mediate the action of phlogogenic factors determining the development and outcomes of inflammation.

Microphages-phagocytic cells-polymorphonuclear leukocytes (mainly neutrophils), absorbing microorganisms.

The response of the acute phase is a systemic reaction of the body to damage and consists in the integration of protective forces: the immune system, hematopoiesis, liver, endocrine system, thermoregulation and some others. The leading pathogenetic factor of acute phase reaction inclusion is the formation of interleukins-IL - 1, IL-6, tumor necrosis factor, interferons. Proliferation - reproduction in the focus of inflammation of cellular elements mainly connective tissue, followed by replacement of the damaged tissue.

Prostaglandins-biologically active substances of lipid nature, forming-Xia in the cleavage of phospholipids of cell membranes and further metabolism of arachidonic acid on the cyclooxygenase pathway, belong to the mediators of inflammation.

Phagocytosis is an evolutionarily developed protective and adaptive reaction of the body consisting in recognition, active capture (absorption) and digestion of microorganisms, destroyed cells and foreign particles by specialized cells - phagocytes.

Phlogogenic factor is a pathogenic irritant, which in strength and duration exceeds the adaptive capacity of the tissue and can cause inflammation.

Chemotaxis is a process of directed, active movement of leukocytes into the inflamed tissue to chemical stimuli - chemoattractants.

Exudate-a liquid of inflammatory origin, coming out of the vessels into the tissue.

Exudation is the process of release of the liquid part of the blood, electrolytes, proteins and cells from the vessels in the tissue.

Emigration of white blood cells - active output of white blood cells from the vessels into the focus of inflammation.

PATHOPHYSIOLOGY OF THERMOREGULATION

Acclimatization-constant changes in the functions of the body with prolonged exposure to high or low temperature and other environmental factors.

Biological zero-the lowest possible temperature of the body, allowing the restoration of function in the provision of medical care.

Hibernate - artificial hypothermia; controlled reduction of body temperature to a preset value necessary for conducting a complex operation on a vitally important governmental bodies.

Hyperthermia (overheating) - a temporary increase in body temperature that occurs as a result of violations of the mechanism of thermoregulation and inconsistency of heat transfer and heat generation.

Hypothermia (hypothermia) - a violation of the thermal balance in the body, leading to a decrease in body temperature.

Homeothermia-the body's ability to maintain a constant temperature te-La.

Convection-heat transfer by moving air or liquid.

Fever is a typical pathological thermoregulatory response of man and the higher homiotherm animals, reflected in increased body temperature as a result of restructuring of the centre of thermoregulation under the influence of pyrogenic substances.

Shortness of breath heat is a compensatory mechanism for increasing heat transfer in Hyper - Thermia.

Pyrogens are substances of exogenous or endogenous nature, causing the occurrence of fever by transferring the set point of thermoregulation to a higher level.

- primary (Exo - and endogenous) - substances that induce the formation of secondary pyrogens.

- secondary (endogenous, leukocyte) - substances that cause functional restructuring of the thermoregulation center.

Pyrotherapy is a method of treatment with the help of artificial temperature increase (for example, the introduction of pyrogenal).

Poikilothermia - the inability of the body to maintain a constant body temperature (the body takes on the ambient temperature).

Temperature decrease lytic-gradual, sometimes within a few days.

----- critical-fast, for a limited time.

Body temperature subfebrile-temperature increase in fever in the range 37-38 °C.

----- hyperpyretic - fever above 41 °C.

Heat stroke is an acute state of General overheating of the body up to 42 °C and more as a result of a violation of thermoregulation, characterized by a variety of damage to the functions of the body.

Thermal conductivity is an indicator of heat distribution over a substance or object by means of a temperature gradient.

Thermogenesis is the process of increasing heat production in the body.

- non-contractile-an increase in heat production due to the activation of metabolism in the internal organs as a result of the creation of arterial hyperemia in them.

- contractile-increase in heat production due to the activation of metabolism in the muscles against the background of increased muscle tone and muscle tremor.

ALLERGY

Allergens - antigenic substances or haptenes nature, causing allergies. Allergens by origin: 1) exogenous, endogenous; 2) non-infectious (household, zpidermalnye, medicinal, industrial, pollen, food), infectious (bacterial, fungal, viral).

Allergy is a typical immunopathological process of the altered reactivity of the sensitized organism at a repeated meeting with the allergen and formation of the AG+at complex with the subsequent development of damage, hyperergic inflammation.

- immunological stage-interaction of allergens with antibodies or sensitized lymphocytes.

- pathochemical stage-cellular-molecular and metabolic changes in response to the formation of the complex AG+at with the formation, activation of Allergy mediators.

- pathophysiological stage-a complex of functional and structural violations'.the appearance of an allergic reaction, its clinical manifestation.

Allergic diagnostic tests-methods of diagnosis of allergic diseases and diseases with an allergic component. Distinguish. 1) skin tests (application, scarification, intradermal), 2) provocative tests (nasal, conjunctival, inhalation tests, cold, heat test), 3) elimination tests.

Anaphylaxis is an allergic reaction of the reagin type (I), arising from the parenteral administration of the allergen. There are active, skin, local, passive, passive reverse and passive straight.

Antigen - any genetically alien substance of Exo-or endogenous origin, which, when ingested, causes a specific immunological response,

Antibodies-proteins globulin fraction of human blood serum and warm-blooded animals, formed in response to the introduction of various antigens into the body and specifically interact with them. Classes of antibodies (immunoglobulins): IgA, IgM, IgG, IgE, IgD.

Atopy-a group of allergic diseases type I, the main role in the development of which belongs to hereditary predisposition.

Autoallergy - form of allergic reactions to self antigens.

- true (primary) - the so-called "barrier tissue" against

which under normal conditions there are antibodies (tissue of the anterior chamber of the eye, thyroid colloid, etc.).

- acquired (secondary) - on the changed own fabric

antigens under the influence of environmental factors-chemical, mechanical, physical.

Diseases of immune complexes-type III allergic reactions-are realized with the participation of precipitating antibodies (IgG, IgM), belong to GNT.

Haptens - a substance with incomplete antigenic structure.

Hypersensitivity is a type of pathological reactivity, which is based on a specific, immunological reaction of the body.

- delayed type (HRT) - a form of allergic reactions that are implemented, mainly due to sensitized T-lymphocytes. The time of manifestations of an allergic reaction is 48-72 hours from the moment of contact with the allergen.

- immediate type (GNT) - a form of allergic reactions, which are implemented mainly due to specific immunoglobulins. The time of manifestations of an allergic reaction-immediately or no more than 8-16 hours after contact with the allergen.

Hyposensitization-reducing the body's sensitivity to antigenic irritant.

- specific-parenteral fractional in increasing concentration

the introduction of the same allergen that caused the sensitization.

- non-specific - the use of immunosuppressive and therapeutic means in cases where specific.

The desensitization is not effective or is not identified allergen.

Idiosyncrasy is a special sensitivity of some people to certain nutrients or drugs. Refers to the phenomena of para-Allergy (cm).

Immunodeficiencies pathological condition hereditary or acquired nature of the failure function of immune system. Occur the tumor-trolled or infectious diseases.

Immunocompetent system (ICS) - a set of organs, tissues and cells that provide biochemical, structural, functional individuality of the body by detecting, destruction and elimination of carriers of foreign genetic information.

Immunological tolerance is a condition characterized by " tolerance " of antigens in the organism. In this case, X cells either do not produce antibodies or lymphocytes, or destruction and elimination of the antigen is not realized. There are pathological, physiological and induced immunological tolerance.

Cell-mediated Allergy-allergic reactions of type IV (T-lymphocyte-dependent Allergy), refers to gzt and is realized with the participation of sensitized T-lymphocytes.

Parallele (heteroallyl) — group reactions, manifestations and ways of re-works similar to Allergy, but differs in the absence of immune stage and the reaction of antigen + antibody.

The reagin type of Allergy-allergic reactions of type I (anaphylactic, atonic) - are realized with the participation of IgE and IgG4, belong to GNT.

Reagin - an immunoglobulin E that has a high CitoyennetO against the fat cells of the connective tissue and basophils of the blood.

Sensitization - increasing the sensitivity of the body to the effects of any factor of the external or internal environment, often antigenic nature, characterized by the formation and accumulation of specific antibodies (immunoglobulins or sensitized lymphocytes).

- active-in contact with antigens in the body and the development of the immune answer's.

- passive-when injected into the intact body serum with ready antibodies or lymphoid cells (T-gzt) from an actively sensitized donor.

- monovalent-sensitization to one allergen.

- polyvalent-sensitization to several allergens.

- cross-sensitization to the antigen having common determinants with the antigen causing sensitization.

Serum disease is a disease characterized by the presence of long-term Cyr-culating immune complexes in the blood, the main type of immunocomplex Allergy (type III allergic reactions) with parenteral administration of large doses of allergen.

The phenomenon of Arthus is a local hyperergic inflammatory reaction with tissue necrosis caused by precipitation of antigen + antibody complex in the vascular wall and tissues.

Cytotoxic type of Allergy-type II allergic reactions are implemented with the participation of IgG and IgM, belong to GNT.

TUMORAL PROCESS

Anaplasia is a property of tumor cells and tissues, which characterizes the loss of the ability to synthesize specific proteins and leads to the formation of undifferentiated neoplasm cells.

Atypism is a property of tumor cells that distinguishes them from normal cells, a return to the previous stage of development.

- biochemical-metabolic and energy changes in tumor tissue, simplification of methods of energy production.
- morphological-structural features of tumor cells and tissues.
- physico-chemical-water-electrolyte abnormalities in the tumor tissue.
- functional-excessive activation of nutrition and proliferation function in tumor cells without performing a specific function.

Autonomy is a property of neoplasm, which determines the unregulated growth of tumor tissue, a violation of the relationship with the body.

The Papova viruses (papova) - a group of oncogenic DNA-containing viruses with common characteristics (human papilloma viruses of rabbits, polyoma, human papilloma virus and aqualicious monkeys).

Hyperplasia-an increase in the number of tissue cells or organ.

Immortalization (immortality) - the acquisition of the ability of the cell to unlimited reproduction, reflects the characteristics of the stage of initiation of carcinogenesis.

Induction is a method of experimental reproduction of the tumor process by direct action of carcinogens on the whole organism.

Initiation is the initial stage of a violation of the genotype of the normal cells with the transfer house to its malignant transformation (formation of latent cells). It is characterized by the acquisition of cell capacity for limitless growth with relative preservation of specific functions.

Infiltrative growth - growth (invasive) tumor cells, characterized by penetration, germination of tumor cells in the surrounding healthy tissue.

Carcinogenesis is the process of formation of malignant tumor tissue, which proceeds in three stages: initiation-transformation of a healthy cell into a latent one, promotion (transformation of a latent cell into a tumor) and tumor progression. The stage of carcinogenesis over-hang of the different oncogenes and the formation of neoplasms required the expression of at least two proto-oncogenes.

Carcinogens are factors that contribute to the development of a malignant tumor.

- biological-biological factors that can cause malignant tumor (viruses).
- chemical-chemical substances capable of causing a malignant tumor (for example, 20-methylcholanthrene, etc.).
- physical-environmental factors (mechanical, thermal factors, ultra-violet radiation, ionizing radiation, etc.) that can cause malignant tumor.

Cataplasia-a synonym for anaplasia, prefix "kata" denotes a downward movement, a decrease in the level of differentiation.

Cocarcinogen - factors that enhance the action of carcinogens.

Limit "hayflik" - genetically determined mechanism that limits the amount of cell division, which, however, may be lost in the transformation of cells into tumor.

Metaplasia-a property that determines the possibility of cell degeneration, the acquisition of properties of other tissue.

Metastasis - the process of formation of new tumor nodes by transferring blood or lymph primary tumor cells.

Neoplasm-tumor, neoplasm, blastoma.

Oncoproteins are proteins, synthesized in the process of transcription of oncogenes.

Oncovirus - RNA-containing or DNA-containing tumorigenic viruses (e.g., virus, breast cancer virus animals or lymphoma Bernita).

An oncogene is an activated proto-oncogene, which plays the role of activator of processes of carcinogenesis.

Oncornaviruses (retroviruses) RNA-containing tumorigenic viruses. Capable of transmitting information in the opposite direction-from RNA to DNA.

A tumor is abnormal cell hyperplasia, characterized by their uncontrolled division and irregularities of the structure, metabolism and function.

The progression of the tumor is a stage of carcinogenesis, during which tumor tissue takes on different signs of malignancy.

Promoter-Exo-or endogenous factor that causes the expression of oncogenes.

Promotion is a stage of carcinogenesis in which a latent (initiated) cell acquires phenotypic properties of a transformed cell under the action of a promoter.

Proto-oncogene is an inactive (repressed) structural gene in normal cells that is similar to viral oncogenes.

Transplantation is a method of experimental reproduction of the tumor process by transplantation of tumor tissue.

- allogeneic (homotransplantation) - transplantation of tissue within weinbrenner lines of animals. It is impossible within healthy tissues and is successful in the transplantation of tumor cells.

Expansive growth - the growth of tumor cells by pushing the surrounding healthy tissue.

Experimental study of the tumor process - the reproduction of the tumor process in experimental animals (in vivo) or the study of tumor tissue in the laboratory in vitro.

Explantation is a method of experimental study of the tumor process by growing a malignant cell in a nutrient medium.

TYPICAL METABOLIC DISORDERS ARE THE VIOLATION OF THE ENERGY EXCHANGE

Agoria - the lack of a sense of fullness.

Bulimia-a feeling of lack of food, accompanied by increased appetite.

Fasting - the state of the body in the absence, insufficient intake of nutrients or a sharp violation of their assimilation.

- absolute-complete cessation of intake of food and water.

- complete-cessation of food intake without water restriction.

- incomplete-insufficient energy supply due to quantitative reduction of nutrients.

- partial-lack of food of any vital substance

(for example, vitamin, protein, water, etc.).

Calorimetry is the measurement of the amount of heat released or absorbed during various physical or chemical processes.

- indirect-a method for determining the energy consumption of the body based on the study of gas exchange, i.e. the amount of oxygen consumed and the release of carbon dioxide.

- direct-a method of determining the energy consumption of the body on the basis of direct measurement of heat production in special chambers.

A calorie is a unit of measurement of energy metabolism corresponding to the amount of energy needed to raise the temperature of 1 g of water by 1 S (from 14.5 to 15.5). According to the international system of units $4,187 \text{ cal} = 1 \text{ Joule (j)}$.

Obesity is an excessive increase in body weight due to adipose tissue.

- Android - obesity in male pattern.

- gynoid-obesity in the female type.

- hypertrophic-is obesity, which increases the volume of fat cells without increasing the number of adipocytes.

- hyperplastic-is obesity, which increases the volume and number of fat cells.

The main exchange - these are the minimum energy consumption of the body, which occur in conditions of relative physical and mental peace at a temperature of comfort, necessary to maintain the processes of life.

Polyphagia-increased food intake.

Energy - the main indicator that characterizes the state of the physical system; the General measure of the movement of matter; the ability to do the work. In a living organism, energy exists in four basic forms: chemical, mechanical, electrical, and heat.

Energy balance - a state of the body in which the amount of energy consumption is equal to energy consumption.

----- positive-a state of the body in which energy consumption pre-has over energy.

----- negative-a state of the body in which energy consumption prevails over energy consumption.

Energy metabolism is the process of formation and accumulation of chemical energy, as well as the process of liberation, transformation of chemical energy substances into other types of energy in the body.

PATHOPHYSIOLOGY OF CARBOHYDRATE METABOLISM

Hyperglycemia-an increase in blood sugar.

Hyperketonemia-an increase in the content of ketone bodies (acetoacetic acid, β -TA - hydroxybutyric acid and acetone) in the blood.

Hypoglycemia - reduction in blood sugar.

Hypoinsulinemia-reduction of insulin in the blood.

- absolute-reduction of insulin in the blood as a result of impaired synthesis and secretion of the hormone.

- relative-the content of insulin in the normal or even increased, but there is insensitivity to the hormone cells. The function of the hormone is blocked in any way (immunologically, genetically, impaired transport).

Glycogenolysis is the breakdown of glycogen.

Glycolysis - anaerobic oxidation of glucose.

Glucosuria-the appearance of glucose in the urine.

Gluconeogenesis is the synthesis of glucose from non-carbohydrate compounds.

The glucose-alanine cycle is the synthesis of glucose from amino acids.

Diabetes insipidus-insufficient production of vasopressin or reduced sensitivity of the tubular apparatus of the kidneys to it, leading to the release of a large amount of urine with a low specific density.

- renal-impaired reabsorption of glucose due to pathology of the tubular apparatus of the kidneys, leading to the development of glucosuria.

Ketonuria-the appearance of ketone bodies in the urine.

Diabetic coma - impaired consciousness with diabetes as a result of increased osmolarity of the blood (hyperosmolar), or metabolic acidosis (acidotic coma).

- hypoglycemic-a violation of consciousness due to a sharp decrease in blood sugar.
- Diabetes mellitus is an endocrine disease caused by absolute or relative insulin deficiency, accompanied by metabolic disorders.
- Type I-insulin-dependent diabetes mellitus (absolute hypoinsulinemia).
 - Type II-insulin-independent diabetes mellitus (relative hypoinsulinemia).
- The Measles cycle is the synthesis of glucose from lactic acid.
- Randle cycle - "glucose-saving" cycle due to oxidation in the tissues of fatty acids instead of glucose ("saving" glucose).

PATHOPHYSIOLOGY OF ACID-BASE BALANCE

Alkalosis is a violation of the acid-base balance, in which there is an absolute or relative increase in the number of bases and a decrease in the concentration of hydrogen ions.

- respiratory-acid-base imbalance associated with change in the work of the external breathing apparatus.
- nonrespiratory - occurs with the accumulation in the body non-volatile products of Sze-lichnogo character. It is divided into: excretory and exogenous.
- compensated-violation of the acid-base balance, in which the compensation mechanisms allowed the blood pH to remain at normal levels (7.35-7.45).
- uncompensated-violation of acid-base balance at which compensation mechanisms were insufficient, and there is a shift in the pH of the blood in the alkaline side.

Urine ammonia is an indicator of the state of the acid-base balance, reflecting the content of ammonium salts in the urine.

Acidosis-a violation of the acid-base balance, characterized by the appearance in the blood of an absolute or relative excess of acids and an increase in the concentration of water-native ions.

- respiratory-violation of the acid-base balance associated with changes in the work of the external breathing apparatus
- non-respiratory-occurs when the accumulation in the body of non-volatile acidic products. It is divided into: metabolic, excretory and exogenous.
- compensated-violation of the acid-base balance, in which the compensation mechanisms allowed the blood pH to remain at normal levels (7.35-7.45).
- uncompensated-violation of the acid-base balance in which the compensation mechanisms were insufficient and there is a shift in the pH of the blood in the acidic side.

buffer system-a complex of chemical components consisting of acidic (donor H⁺) and basic (acceptor H⁺) components, the ratio between which at normal pH is a constant.

- protein-buffer properties of proteins (in particular blood proteins) are based on their ability to exhibit amphoteric properties.
- bicarbonate - the ratio of carbonic acid to its acid salt. This ratio is 1: 20.
- hemoglobin-the ratio of oxyhemoglobin to reduced hemoglobin.

phosphate - the ratio of single sodium phosphate to dwuzameshchenny the sodium phosphate.

Urine titration acidity (TC) is the amount of ml of 0.1 N NaOH solution needed to neutralize acidic products contained in urine.

BB-base buffer, shows the total content of all major valences in the blood (blood bicarbonate, protein anions).

The VE-base kurtosis is the shift of the buffer bases, i.e. the number of bases that need to be either added or removed from the medium so that under standard conditions at $t = 37\text{ }^{\circ}\text{C}$ and $p\text{CO}_2 = 40\text{ mm Hg}$. V., the blood pH would be 7.4.

blood pCO₂ is the partial pressure of CO₂ in the blood.

blood pH is the logarithm of the inverse concentration of hydrogen ions.

$pH = \log 1 / [H^+] = 7.35-7.45.$

SB - standard bicarbonate, shows the content of bicarbonate in the blood.

PATHOPHYSIOLOGY OF WATER-ELECTROLYTE BALANCE

Aldosterone is a hormone of the glomerular zone of the adrenal cortex that regulates sodium reabsorption in the distal tubules of the kidneys.

Antidiuretic hormone (ADH = vasopressin) - a hormone formed in the supraoptic and paraventricular nuclei of the hypothalamus, allocated the posterior lobe of the pituitary gland, causes an increase in water reabsorption in the distal tubules of the kidneys.

Extracellular fluid-liquid contained outside the cells, this includes: blood (plasma), lymph, cerebrospinal fluid, intracellular, intercellular fluid. Water balance - maintaining a balance between the amount released from the body and the fluid entering the body.

----- negative-dehydration, water intake is less than discharge.

----- positive-hyperhydration, fluid intake exceeds the body's water loss.

Hydrostatic pressure-blood pressure on the vessel wall during its movement.

Hyperhydration-increasing the amount of fluid in the body.

Hyperosmia - an increase in osmotic concentration of substances in the extracellular fluid-bone.

Hypohydration-a decrease in the amount of fluid in the body.

Hyposmia - decrease of osmotic concentration in extracellular fluid.

Dehydration-dehydration.

Oncotic pressure - normal osmotic concentration of substances in the extracellular fluid. Oncotic pressure-due to the content of proteins in the environment (in the blood, in the tissues). Osmotic pressure-due to the value of osmotically active substances, their number.

Edema is a typical pathological process, excess water and electrolytes in the body, which is characterized by the accumulation of isoosmotic fluid in the intercellular space.

Polyuria-an increase in the amount of urine.

Exicosis-dehydration of the intracellular space.

EXTREME STATE

Adaptation-adaptation of a living organism to constantly changing conditions of existence in the external environment, developed in the process of evolution.

- long-term-complex adaptive reactions based on

hyperplasia of actively working structures aimed at long-term maintenance of high functional activity of the body.

- urgent - complex of nervous and humoral non-specific adaptive mechanisms arising in response to unfamiliar (unusual) or ex-tremal factors.

- specific-a complex of specific changes in the body, characterizing the qualitative nature of the stimulus. Example: to decrease temperature of environment increase thermogenesis.

Adaptation syndrome is a set of response nonspecific reactions that occur in the body of an animal or a person under the action of any pathogenic irritant.

Antioxidants - intracellular system of enzymes (catalase, superoxide dismutase, glutathione peroxidase, glutathione reductase, etc.), limiting hyperactivation of free radical oxidation. They belong to stress-limiting systems.

Homeostasis - relative dynamic constancy of the internal environment (blood, lymph, tissue fluid) and the stability of the basic physiological functions (blood circulation, respiration, temperature regulation, etc.).

Adaptation hormones are hormones that take part in the process of adaptation and implementation of stress (corticotropin-releasing factor, ACTH, glucocorticoids, adrenaline, etc.).

Disadaptation is a state of the body associated with the inability to form adequate adaptive reactions, which leads to incomplete adaptation or its failure.

Distress (in Selye) is a syndrome that acquires the role of a pathogenic factor for the organ.

Coma-the extreme degree of pathological inhibition of the Central nervous system, characterized by a deep loss of consciousness, lack of reflexes to external irritation and disorder of regulation of vital functions of the body.

Collapse-acute vascular insufficiency, which occurs as a result of the fall of vascular tone and decrease in BCC, which is accompanied by a sharp drop in blood pressure, a decrease in venous return of blood to the heart, metabolic disorders and inhibition of vital functions.

Fainting is a short-term loss of consciousness that occurs as a result of acute hypoxia of brain tissues, which leads to a violation of their metabolism.

General adaptation syndrome (CCA) - occurs as a General, generalized reaction of the whole body in response to any adverse effect, which leads to the appearance of nonspecific changes in the body: hypertrophy of the adrenal cortex, involution of the thymic-lymphatic system, bleeding ulcers of the stomach and duodenum. In Selye adaptation syndrome can be: a) General, generalized, the most severe manifestation of which is shock; b) local, developing in the form of inflammation.

Selye G.-the founder of the doctrine of stress and General adaptation syndrome.

Stress - a condition that occurs under the action of emergency stimuli on the body, leading to the appearance and tension of non-specific adaptive mechanisms (OAS complex), the mobilization of which is aimed at the adaptation of the body.

— the stage of alarm (call to arms) - 1 stage-SLA - there is a mobilization of protective forces of an organism.

----- resistance-the 2nd stage of the CCA-there is a restoration of the disturbed balance, the body becomes more resistant to the action of not only this stimulus, but also in relation to other pathogenic factors (cross-adaptation).

-----exhaustion - the 3rd stage of SLA (according to Selye), occurs in the case when the body does not completely overcome the ongoing effects of the pathogenic defector.

Stress-limiting system-the body's system (Central - GABA-ergic, serotonergic, opioid and peripheral - prostaglandins, antioxidants, etc.), which are able to limit the excessive damaging effect of adaptive hormones in long-term, repeated stress effects.

Stress-implementing systems-systems of the body, taking the greatest part in the realization of stress-sympathoadrenal system, hypothalamic-pituitary-adrenal system.

Stress factors-factors that can cause the development of stress. Can be absolute and relative.

Functional system of adaptation-a single morphofunctional system in the structures of the Central nervous system, the formation of which is aimed at achieving a specific adaptive effect.

Shock (shock, shock) is a typical, stage-by-stage pathological process that occurs as a result of disorders of neuro-humoral regulation, caused by extreme effects (mechanical trauma, burns, electric trauma, etc.), accompanied by a sharp decrease in blood supply to tissues, hypoxia and oppression of the body functions.

Emotional stress is a state of pronounced psychoemotional human experience of conflict life situations, which sharply or for a long time limit the satisfaction of his social and biological needs.

Eustress (for Selye) - a condition that contributes to the preservation of health.

PATHOPHYSIOLOGY OF ORGANS AND SYSTEMS PATHOPHYSIOLOGY OF THE NERVOUS SYSTEM

Anti - system- the functional opposites of the regulatory systems that the functioning of the ruyut in cooperation with the activating system and is the highest form of regulation of the process (for example, the stress-realizing and stress-limiting systems, coagulants and anticoagulants, etc.).

Antinociceptive systems are systems that control the activity of the structures of the nociceptive system and, with a joint function, make up the General system of pain sensitivity. Antinociceptive systems play a crucial role in the mechanisms of prevention and elimination of pathological pain.

Pain is a psychophysiological, motivational and emotional state of a person that occurs under the action of pain, nociceptive stimuli that violate the integrity of the cover membranes, ensuring the isolation of the body from the outside world.

- protomoteca - provides a rough detection of painful stimuli, their emotions of joy-the national color and is associated with the activation of the fibers spinothalamic tract, passing the future in antinaturalism the spinal cord.

- phantom-pain, localized by the patient in the missing limb.

- epicaricacy - determines the ability of subtle differentiation

pain irritation and is provided with the impulses extending in dorsally the pillars of brain fibers spinobulbar tract.

Vegetarian - form of the pathology, which is associated with disorders of the nervous regulation of visceral systems. For example, the neurosis of the stomach - a violation of motor and secretory activity of the stomach due to the pathology of the regulation of the autonomic nervous system.

The pathologically enhanced excitation generator (GTUV) is an aggregate of hyperactive interacting neurons that produce an excessive flow of impulses. The concept of GPUV introduced Acad. Mr. N. Kryzhanovsky.

Denervation syndrome is a complex of changes that occur in postsynaptic neurons, organs and tissues after the loss of nerve effects on these structures.

The pathological determinant is the formation of the CNS (Department, nucleus, nerve center, etc.), which forms the pathological system and determines the nature of its activity. Intra-category relationships in the nervous system.

Decerebrate rigidity is the development of appropriate rigidity of muscles in experimental or clinical disinhibition of spinal motoneurons under the braking influence of higher parts of the brain.

The dominant pathological-hyperactive pathological system, which causes oppression of other physiological systems and in this connection disorganization of activity of the Central nervous system, the Category of intersystem relationships in the nervous system.

Neurosis - a psychogenic disease that occurs on the background of the peculiarities of the personality and lack of mental protection with the formation of neurotic conflict, which are manifest-usesa functional disturbances in emotional, autonomic, and somatic spheres.

- experimental-animal modeling of typical disorders

functions of the nervous system, resulting from overstrain and disruption of higher nervous activity effects, superior to its functional capabilities.

Neurodystrophy is a violation of the trophism of an organ or tissue after loss or change of nerve influences.

Nociceptive system-a system of perception and transmission of pain signal.

Paralysis - complete loss of motor function with the lack of muscle strength as a result of pathological processes in the nervous system.

Paresis is a weakening of motor function with a decrease in muscle strength caused by a violation of the motor system at different levels.

Pathological system - a new pathodynamic organization that occurs in the Central nervous system in terms of damage, the main feature of which is its disadaptive or direct pathogenic value for the body.

Disinhibition (lack of inhibition) - a pathological process in the Central nervous system, which is accompanied by a weakening or complete cessation of inhibitory effects on neurons. Disinhibition is a leading pathogenetic basis of forming GPOV.

Spinal shock-deep, but reversible oppression of motor or vegetative reflexes, which occurs after the violation of the integrity of the spinal cord below the break. Associated with loss of stimulation of the activating structures of the brain.

Sustainable pathological condition - a form of adaptive reactions of the organism in connection with the change in the functional status of individual structures of the brain, fixed in long term memory, which creates a new relationship between systems of regulation.

Emotions - a subjective assessment by the brain of a person or animal of the possibility of satisfaction of any actual (dominant) need.

- negative-subjective assessment by the human or animal brain

low probability of satisfaction of the dominant motivation, emotions of mobilization for obtaining useful adaptive result.

- positive-subjective assessment by the human or animal brain

high probability of satisfaction of the dominant motivation, emotions of fixing of behavioral and vegetative reactions on achievement of useful effect.

PATHOPHYSIOLOGY OF THE ENDOCRINE SYSTEM

Adrenogenital syndrome is a disease characterized by hyperproduction of hormones of the zona of the adrenal cortex. Revealed signs of hypertrichosis, narrowing of gonadal function.

Acromegaly is a disease characterized by excessive production of somatotrophic hormone (STG) in adults, characterized by "marginal" bone growth, increasing the mass of soft tissues and organs. There is persistent hyperglycemia, often complicated by diabetes.

Aldosteronism is a syndrome caused by an excess of mineralocorticoids of the adrenal cortex (aldosterone).

Bazedova disease (hyperthyroidism) - a disease characterized by excessive effects of thyroid hormones of the thyroid gland. It is revealed by an increase in the main metabolism, ATP deficiency, hyperthermia, disorders of the nervous system. Observed tremor, exophthalmos, tachycardia, frequent atrial fibrillation.

Addison's disease is a disease characterized by chronic adrenal insufficiency, manifested primarily by the insufficiency of the effects of mineralocorticoids (aldosterone) and glucocorticoids. Is characterized by hyponatremia, hyperkalemia, physical inactivity, hypotonia, hypoglycaemia, hypothermia etc.

Virilization-the development of the female body by male type (with adreno-genital syndrome). It is manifested by the growth of the mustache, beard, voice coarsening, excessive hair (hirsutism), amenorrhea, atrophy of the uterus, mammary glands, etc.

Gigantism-an excess of somatotropin in the early stages of development of the body, leading to a proportional increase in growth-weight indicators.

Pituitary cachexia (Simmonds syndrome)-a lack of pituitary hormones, which is characterized by a violation of the function of peripheral pituitary-dependent endocrine glands.

Pituitary dwarfism (dwarfism) - a disease characterized by insufficiency of somatotrophic hormone (STG) since birth, leading to a violation of growth (no more than 1-1.2 m).

Hirsutism-excessive hair on the pubis, back, limbs, face, armpits.

Cushing's disease (hypercorticism) is a disease characterized by the violation of regulatory mechanisms that control the hypothalamic-pituitary-adrenal system. It is characterized by hyperproduction of glucocorticoids, slightly increased the formation of mineralocorticoids and androgens by the adrenal glands. It is manifested by obesity, hypertension, hyperglycemia (complicated by diabetes), osteoporosis, violation in the sexual sphere, hypertrichosis (in women).

----- syndrome-tumor lesions of the adrenal cortex of the primary or metastatic nature, which are accompanied by hyperproduction of glucocorticoids.

Cretinism is a pathological condition of severe insufficiency of thyroid hormones at an early age. It is manifested by dementia, dwarfism, multiple metabolic disorders.

Myxedema (hypothyroidism) is a disease characterized by reduced function of the thyroid gland in the adult state, characterized by a decrease in the main metabolism, ATP deficiency, low physical and mental activity, hypothermia, mucus edema, bradycardia, angina, etc.

The horse syndrome - a disease characterized by manifestations of primary hyperaldosteronism (adenoma of glomerular zone of the adrenal cortex). Is characterized by a hypokalemia, hypertension, polyuria, a tendency to paresis of the muscles, combined with intermittent seizures.

Pheochromocytoma - tumor of adrenal medulla. Characterized by hypertension, tachycardia, hyperglycemia, etc.

PATHOPHYSIOLOGY OF THE CARDIOVASCULAR SYSTEM

Automatism of the heart-the ability of the myocardium to autonomic reduction due to the properties of the cells of the cardiac conduction system to the automatic formation of impulses.

-----violation - tachycardia or bradycardia by increasing or decreasing the generation of pulses in nomotopnye the pacemaker. Respiratory arrhythmia - due to fluctuations in the tone of the vagus nerve during the act of breathing. In pathological cases, there may be pockets in the lower sections of the conduction system, which can become the drivers of automaticity of the heart (see arrhythmia).

Algorithmia - right balance (alternating) between sinus pulses and extrasystoles. For example: bigeminy, trigeminy etc.

Cardiac rhythm alternation-inequality in amplitude and duration of successive excitations and contractions.

Aneurysm of the heart-limited protrusion of the heart wall, developed as a result of thinning of the myocardium at the site of necrosis or scar.

Aortitis-inflammation of the aorta of various etiologies.

Arthralgia pain syndrome encountered in artitech, atherosclerosis, and aortic aneurysm.

Arrhythmia – abnormal heart rhythm - the frequency and consistency of heart rate.

Arteritis-inflammatory diseases of the arteries.

Arteriosclerosis-compaction and thickening of the walls of the arteries, observed in atherosclerosis, calcification, hyalinosis of arterioles, and as a consequence of chronic inflammatory processes.

Atherosclerosis is a General pathological process, the main morphological manifestation of which is the deposition of lipids (cholesterol) in the intima of large and medium-sized arteries with subsequent growth of connective tissue and a decrease in vascular lumen.

Bigeminy - paired heart rate, every two cardiac cycles are separated by a longer pause. A variety of ventricular extrasystole, when an extraordinary reduction follows each normal, after which there is an elongated pause.

Blockade of the heart-slowing or complete cessation of the excitation pulse through the conductive system and the contractile myocardium of the heart.

Bradycardia-heart rate reduction of less than 60 beats per minute.

Valvulitis-an inflammatory process in the heart valves, is a frequent manifestation of endocarditis.

Gastrocardiac syndrome Remhelda - a feeling of pressure and pain in the heart, cardiac arrhythmias and ECG changes after a meal.

Hemopericardium-accumulation of blood in the heart bag as a result of hemorrhage, due to external rupture of the heart, aortic aneurysm, coronary arteries, myocardial infarction, wounds of the heart, ascending aorta, pulmonary artery.

Hydroperiod - accumulation of transudate in the pericardial cavity.

Hypertension-increased hydrostatic pressure in the blood vessels, cavities and hollow organs.

- arterial-increased blood pressure in the arteries.

- venous - increased venous pressure. It is combined with the slowing of blood flow in the system of upper and lower hollow veins.

- pulmonary (SYN. hypertension of the small circle of blood circulation) - increase in blood pressure in the vessels of the small circle of blood circulation.

- portal-increased blood pressure in the portal vein system, manifested by venous collaterals on the anterior abdominal wall, varicose veins of the esophagus, ascites and enlargement of the spleen.

Hypertension (SYN. essential hypertension) - poly-etiological disease, the main manifestations of which are: high blood pressure in combination with disorders of vascular tone, the stage in the development of symptoms, expressed dependence of the course on the functional state of the nervous mechanisms of blood pressure regulation in the absence of a visible causal relationship of the disease with the primary organic damage to any organs and systems.

Myocardial hypertrophy is a compensatory increase in the mass of the heart muscle of a particular Department of the heart.

Hyperfunction of a myocardium - heavy work of the myocardium.

----- isometric-occurs as a result of increased resistance

blood flow (stenosis of the orifice, vasoconstriction) in the phase of isometric stress (phase of closed valves), which leads to increased pressure in the corresponding chamber of the heart at a constant length (isometry) of myocardial fibers.

----- isotonic-occurs as a result of increased blood flow in the

diastole in a particular part of the heart, which leads to the overgrowth of the fibers of the myocardium, at a constant level of pressure (isotony) in the corresponding part of the heart.

Hypotension arterial-lowering blood pressure in the arterial system below 90/60 mm Hg. art.

Dextrocardia is an innate location of the heart on the right side of the middle line.

Ventricular septal defect (illness Tolochinova-Roger) - a congenital heart defect, the blood from the left ventricle partially distilled to the right during systole, and during diastole it back.

Defibrillation is one of the methods of electropulse therapy of cardiac arrhythmias.

Diverticulum of the pericardium - congenital protrusion of outward the parietal leaf of PE-Ricarda fingerlike or Bay shape.

Dilation-persistent, diffuse expansion of the lumen of any hollow organ.

- cavities of the heart is a compensatory reaction to prolonged stress.

----- myogenic-expansion of the heart cavities due to overload increased volume of blood flowing.

-----tonogennoy - the expansion of heart cavities due to overloading increased with the resistance to expulsion of blood.

Myocardial infarction-a site of necrosis of tissue. It is an acute form of coronary artery disease, due to the insufficiency of coronary blood flow, regardless of the mechanisms (stenosis, thrombosis, spasm, etc.) underlying this insufficiency.

Coronary heart disease (CHD) is an acute or chronic disease that occurs as a result of a decrease or cessation of blood supply to the myocardium due to atherosclerosis of the coronary vessels.

Cardialgia - the pain in the heart area, not typical for Stroker-DII.

Cardiomegaly is a large size of the heart.

Cardiomyopathy - a disease characterized by the lesions of the heart muscle degenerative nature, flows without coronary atherosclerosis, arterial hypertension, myocarditis and valvular lesions.

Cardiosclerosis-excessive formation of connective tissue in the heart muscle. It is observed as a consequence of coronary atherosclerosis, myocardial infarction, severe forms of myocarditis, etc.

Cardio-cerebral syndrome - a brain disorder that is observed during cardiac arrhythmias.

Kyphoscoliotic heart is a chronic pulmonary heart that develops as a result of kyphoscoliosis.

Coarctation of the aorta-congenital narrowing of the aorta (arch, isthmus).

Coronary-inflammation of the wall of the coronary vessels (heart vessels).

Coronary insufficiency-mismatch of blood flow in the coronary vessels of myocardial oxygen demand, resulting from atherosclerosis of coronary vessels, spasm, coronaritis, excessive myocardial oxygen demand, etc. Distinguish acute form (angina pectoris, myocardial infarction) and chronic.

Coronary atherosclerosis-the defeat of the atherosclerotic process of the coronary vessels of the heart.

Coronary-cerebral syndrome is a symptom complex of acute cerebral circulation disorders due to acute coronary insufficiency.

The pulmonary heart is dilatation or hypertrophy of the right heart that occurs as a result of functional or organic changes in the lungs that are not associated with primary heart disease.

Atrial fibrillation is a violation of the heart rhythm due to the asynchronous contraction of individual muscle groups of the atrium, while the atrial systole is absent.

Myocardiodystrophy (SYN. myocardial dystrophy) - characterized by disorders of myocardial trophism, not associated with organic diseases of the heart and blood vessels, occurs secondary to the disease in other organs and systems.

Myocarditis-inflammation of the heart muscle, observed in infectious diseases, focal infection, rheumatism, systemic connective tissue diseases, allergic conditions.

Insufficiency of the aortic valve is an acquired heart defect, while the half-moon valve leaflet does not completely close the aortic opening - part of the blood from the aorta enters the left ventricle into the diastole.

- bivalve (mitral) valve-acquired heart disease,

it is characterized by incomplete closure of the valve valves, resulting in a reverse blood flow to the systole (regurgitation) from the left ventricle to the left atrium.

- semilunar valves of the pulmonary artery-acquired heart disease, not complete closure of the valves leads to the fact that the blood during diastole from the pulmonary artery enters back into the right ventricle.

- tricuspid valve-acquired heart disease, more often functional character as a result of expansion of the right ventricle (relative insufficiency), while during systole blood is thrown not only in the small circle of blood circulation through the pulmonary artery, but also in the right atrium, which causes its expansion.

Insufficiency of the circulatory system-pathological conditions characterized by a decrease in the IOC (minute volume of blood flow). The term circulatory insufficiency includes the concepts of heart failure, vascular insufficiency, and hypovolemia.

The cleft arterial duct - congenital heart defect, through the open bot-fishing duct blood flows from the aorta where the pressure is greater in the pulmonary artery.

- the oval hole is a defect of the atrial septum, as a result of which part of the blood from the left atrium passes into the right one.

Pulmonary edema-an attack of acute suffocation, accompanied by a large number of dry and wet wheezing in the lungs and cyanosis. It develops with left ventricular heart failure.

The carapace heart is the outcome of chronic pericarditis of rheumatic, tuberculosis, bacterial etiology, as well as after injuries and traumas.

PATHOPHYSIOLOGY OF EXTERNAL RESPIRATION

Alveolar hyperventilation - a form of violation of gas exchange function of the lungs, characterized by excess, exceeding the current needs of the body, the release of carbon dioxide from the blood due to an increase in the volume of alveolar ventilation.

- hypoventilation - standard form of violation of the external respiration system, in which the minute volume of alveolar ventilation is less than the gas exchange requirement of the body.

Apnea - absence of breathing or temporarily stop breathing.

Asphyxia is a pathological condition caused by acute or subacute reduction of oxygen in the blood and an increase in carbon dioxide due to respiratory disorders.

Atelectasis is the pathological process collapsed alveoli, which interferes with the process of ventilation

Bradypnea is a rare breath.

External respiration — the gas exchange process of the ambient air and blood.

- amnesticescoe - terminal type breathing, characterized by a spasmodic inhalation and exhalation rare.

- Biota-a type of periodic breathing, which is characterized by alternating apnea with breathing with a constant amplitude.

- gaspings-terminal breathing in the third stage of asphyxia, characterized by apnea and subsequent several rare convulsive respiratory movements, after which there is paralysis of breathing.

- Kussmaul - rare deep noisy breath, which after a deep breath exhale should be reinforced with active participation of the expiratory muscles. Often observed in patients with diabetic coma.

- Chain-Stokes-a type of periodic breathing, which is characterized by an increase in the amplitude of breathing to severe hyperpnea, and then there is a decrease to apnea.

Respiratory failure - the state of the body, in which either the maintenance of normal gas composition of the blood is not provided, or the latter is achieved due to abnormal operation of the external breathing apparatus, leading to a decrease in the functional capabilities of the body. Classification of respiratory failure: 1) centrogenic, 2) neuromuscular, 3) thoracic-diaphragmatic, 4) bronchopulmonary (obstructive, restrictive).

The obstructive type of breathing disorders is characterized by a decrease in the airway permeability, as a result of the increase in the so-called resistive (non-elastic) resistance to air flow.

Shortness of breath (dyspnea) is a violation of the frequency, rhythm, depth of breathing or an increase in the work of the respiratory muscles, which is manifested, as a rule, by a subjective feeling of lack of air or breathing difficulties.

- inspiratory-shortness of breath in the form of difficulty breathing.

- expiratory-shortness of breath in the form of difficulty exhaling.
- Periodic breathing is a violation of the rhythm of breathing, in which periods of breathing alternate with periods of apnea.
- Pneumothorax-the presence of air or gas in the pleural cavity.
- internal-pleural cavity communicates with the atmosphere through defects in the lung tissue, trachea or bronchi.
 - closed-there is no communication between the pleural cavity and the atmosphere.
 - valve - the air enters the pleural cavity during inhalation, and when exhaling it can not leave it because of the overlap of the hole in the pleura.
 - therapeutic (artificial) - a method of collapse therapy, created by the introduction of air into the pleural cavity for therapeutic or diagnostic purposes.
 - stress-a pronounced degree of valve pneumothorax, in which the pressure in the pleural cavity is much higher than atmospheric.
 - external-pleural cavity communicates with the atmosphere through a defect in the chest.
 - open - air enters when inhaled, and when exhaled comes back out of the pleural cavity.
 - spontaneous-sudden appearance of air in violation of integrity pleura of unknown etiology (often a manifestation of cavernous tuberculosis or lung cancer).
 - surgical-when opening the pleural cavity during surgical operation.
- Polypnea (tachypnea) - frequent shallow breathing.
- Restrictive respiratory disorders-hypoventilation disorders that occur due to the restriction of lung expansion.

PATHOPHYSIOLOGY OF THE BLOOD SYSTEM

VIOLATIONS OF SYSTEM ERITREA

Anemia-a disease characterized by a decrease in the number of red blood cells and (or) hemoglobin content per unit volume of blood.

Anisocytosis is a degenerative change in red blood cells characterized by the appearance of red blood cells of different sizes.

Probably the external factor - vitamin B12 and folic acid.

-----internal - gastronomiepreis (castle's factor) - binds to vitamin

B12 and folic acid in the stomach, preventing destruction and promoting their absorption.

Disease Addisona-Barmera - B12 - and folic acid deficiency anemia, which is caused by absence in gastric juice of patients of gastronomiepreise.

Hematocrit is an indicator of the ratio of the volume of blood cells (mainly erythrocytes) and the volume of plasma in 1 l (1 ml) of whole blood. Hematocrit normally ranges from 0.36 to 0.48 g / l, which corresponds to 36-48 %.

Hemoglobinopathies are anemia, in which the hemolysis of red blood cells is associated with a violation of the protein (globin) part of hemoglobin. These include sickle cell anemia and thalassemia.

Hemolytic anemia-anemia that occurs due to increased Erythro-dieresis, when the destruction of red blood cells (hemolysis) prevails over their formation.

----- hereditary-is anemia with predominant intracellular hemolysis of red blood cells. The hemolysis of erythrocytes caused by membrane defects (membranophone), enzyme composition (enzyme defect) or hemoglobin (hemoglobinopathies).

----- acquired-is anemia, with a predominant intravascular hemolysis, in which the hemolysis of red blood cells due to the action of toxic substances, antibodies or mechanical damage to red blood cells.

Hematopoietins-hormones that stimulate hematopoiesis (erythropoiesis, leukopoiesis, thrombocytopoiesis).

Algorithmicheskie hypervolemia - increase in volume of circulating blood (BCC) due to the greater volume of blood plasma. Hematocrit is below normal.

- simple - the increase in BEC for which the ratio between the amount of cell elements and plasma remain normal. Hematocrit index is stored within normal limits.

- polycythemic-increase in BCC due to red blood cells. Hematocrit is above normal.

Hypovolemia oligocytemic-reduction of BCC by reducing the content of red blood cells. The hematocrit index decreases.

- polycythemic-reduction of BCC by reducing plasma volume. The hematocrit index increases to 55 % and above.

- simple-reduction of BCC, in which the ratio of the volume of cell elements and plasma remains normal. The hematocrit is maintained in the normal range.

Iron deficiency anemia-is anemia caused by a lack of iron in the body as a result of a violation of the balance between its receipt, use and release from the body.

Megaloblasts, megalocytes - red blood cells of embryonic type of blood formation, Mak-rocit.

Megaloblastic (embryonic) type of hematopoiesis is typical in the norm for the fetus in the first half of pregnancy and in pathology in B12 and folic-deficient anemia.

Membranopathy is anemia, in which the hemolysis of red blood cells is associated with a hereditary violation of the structure of their membranes. For example, microperimetry hemolytic anemia (a disease of the Minkowski-a's) is inherited in an autosomal dominant pattern.

Normovolemia oligo-and polycythemic-is a change in the ratio between cellular elements and plasma in the normal total blood volume.

Posthemorrhagic anemia acute-is anemia that occurs after rapid massive blood loss in vascular injuries or damage to the pathological process.

-----chronic - anemia resulting from chronic small

blood loss caused by damage to blood vessels in a number of diseases (dysmenorrhea, peptic ulcer, jaundice, hemorrhoids, etc.) and violation of platelet-vascular and coagulation hemostasis (hemorrhagic diathesis). According to the pathogenesis is a kind of iron deficiency anemia.

Poikilocytosis-a degenerative change in red blood cells, characterized by the appearance of red blood cells of various shapes.

Reticulocytes - young erythrocytes, an indicator of the activity of hematopoiesis.

Sideroachrestic anemia is hereditary or acquired anemia that occurs as a result of a violation of the inclusion of iron in heme with a decrease in the activity of enzymes that catalyze the synthesis of porphyrins and tema. Leads to the development of hemosiderosis.

Fermentopathy is anemia, in which hemolysis is associated with impaired activity of erythrocyte enzymes. For example, glucose-6-phosphate dehydrogenation anemia; inherited as a dominant sex-linked X chromosome.

Color index-a conditional characteristic of the degree of saturation of red blood cells with hemoglobin, reflects the average content of hemoglobin in one red blood cell (in conventional units) or % ratio of hemoglobin and red blood cells, normally equal to 0.82-1.05.

Late chlorosis-iron deficiency anemia that occurs in the climacteric period in violation of hormonal balance.

- early-iron deficiency anemia that occurs during growth and sexual aging.

Erythrocytosis absolute-an increase in the absolute number of red blood cells due to their increased production in the bone marrow.

- relative-an increase in the content of red blood cells and hemoglobin per unit volume of blood without increasing their absolute number.

Erythroblastosis of the fetus-hemolytic disease of newborns-a kind of praying anemia that occurs due to RH incompatibility of the fetus and the mother.

B12-and folic-deficiency anemia-is anemia, associated with a violation of the synthesis of nucleic acids and the replacement of erythroblastic type of hematopoiesis on megaloblasts-chesky due to lack of body cyanocobalamin (vitamin B12) and folic acid (megaloblastic anemia).

VIOLATIONS OF SYSTEM LAKOMA

Agranulocytosis (granulocytopenia) - a sharp decrease in the blood of granulocytes (to 0.75 g/l or less) against the background of an overall decrease in leukocytes.

Aleikia is an aplastic lesion of the bone marrow with a sharp depression of myeloid hematopoiesis and lymphopoiesis.

Basophilia-an increase in the number of basophils; a rare phenomenon, occurs in systemic blood diseases (chronic myelosis, erythremia).

The hematological malignancies - neoplastic diseases of the blood system.

The nuclear shift index is an indicator of leukocytosis regeneration activity expressed by the ratio of the number (in %) of immature (non-segmented) neutrophils to Mature segmented neutrophils. The nuclear shift index is normal = 0.05-0.08. There are 3 types of nuclear shifts: sharp, moderate and weak.

Leukemic hiatus - lack of transitional forms of cells in blood, the gap in GE-ogramme between undifferentiated and Mature cells characteristic of acute leukemia.

Leukemoid reaction is a type of leukocytosis with a sharp regenerative shift, in which changes in the bone marrow and, accordingly, in the blood resemble those in leukemia. However, they differ in etiology (the causal factor is often known) and pathogenesis (reactive hyperplasia of leukopoietic tissue), are temporary, reversible and do not transform into a tumor.

Leukemia is a systemic lesion of hematopoietic tissue by the type of tumor process. Leukemia is characterized by uncontrolled proliferation and impaired ability to differentiate hematopoietic cells.

- acute-characterized by blockade of differentiation of hematopoietic cells in one of the early stages of hematopoiesis. At the same time, the " tumor substrate " is represented by power cells (class 2, 3 and 4), which can be identified by cytochemical tests. Accordingly, there are acute leukemia: myeloblastic, lymphoblastic, monoblastic, etc.

----- myeloblastic-a disease belonging to the group of acute leukemias. This OPU-hol, arising from cells of the predecessor of myelopoiesis. In the developed stage of the disease, myeloblasts predominate in the blood (up to 90-95 %). There is a small percentage of Mature granulocytes and very few intermediate forms. This gap is called leukemic gaping. Myeloblastic leukemia is more common in adults, occurs with severe anemia and hemorrhagic syndrome.

----- lymphoblastic-a disease belonging to the group of acute leukemias. This is OPU-Chol, consisting mainly of T-lymphocytes. The blood is dominated by lymphoblasts-the primordial cells of lymphopoiesis. Lymphoblastic leukemia occurs mainly in children, occurs with an increase in lymph nodes, it is characterized by neuroleukemia and specific orchitis.

----- monoblastic-a disease belonging to the group of acute leukaemia. This OPU-Khol, composed primarily of monocytes. Monoblasts predominate in blood - rodo-initial cells of myelopoiesis. It occurs more often in adults, characterized by necrotic lesions of the mucous membranes and gingivitis.

- chronic is characterized by the fact that the differentiation of hematopoietic cells is partially retained. The substrate of the tumor is represented mainly by maturing and Mature cells (5th and 6th grade), "power cells" appear only in the period of exacerbation. Co-responsibly

distinguish chronic leukemia: myeloid leukemia, lymphocytic leukemia, multiple myeloma, Vaquez disease.

Leukopenia is a decrease in the number of leukocytes per unit of blood volume. Can occur with uniform and preferential reduction of certain forms of leukocytes (on natural hair. -, eosin-, lymph-, monocytopenia) and to be absolute and relative. The basis for the development of leukopenia is based on the following mechanisms: 1) inhibition of leukopoiesis; 2) destruction of cells in the blood and blood-forming organs; 3) redistribution of leukocytes in the bloodstream; 4) increased secretion of white blood cells from the body.

Leukocytosis is an increase in the number of leukocytes per unit of blood volume. In the mechanism of leukocytosis in different physiological conditions and diseases, the main role belongs to the stimulation of leukopoiesis and accelerated release of leukocytes into the blood. Depending on the increase in the blood of certain types of white blood cells distinguish neutrophilic leukocytosis, basophilic leukocytosis, lymphocytosis, monocytosis.

- absolute - due to an increase in the absolute number of leukocytes in the blood due to increased production of normal or pathologically altered cells in the bone marrow or increased their flow from the bone marrow into the blood.

- relative - observed in the redistribution of leukocytes from

the wall of the pool circulating. It occurs after the introduction of adrenaline, emotional stress, during shock, collapse, as well as in the blood vessels of those tissues that are located in the inflammatory focus, where the leukocytes migrate (with phlegmon, abscess, appendicitis).

Lymphocytic leukemia is a disease belonging to the group of chronic leukemias. This tumor is predominantly from B-lymphocytes. The tumor may also occur from T-lymphocytes. In the blood smear of patients dominated by Mature lymphocytes, there are single lymphoblasts and prolymphocytes. A very characteristic appearance in a smear of shadows Botkin-Gumprecht {crushed when preparing a smear defective lymphocytes}. Refers to benign tumors, does not show signs of tumor progression practical throughout the disease. Affects mostly elderly men.

Lymphocytosis — an increase in the number of lymphocytes is observed in chronic infections (tuberculosis, syphilis), allergic reactions of the delayed type (autoallergy, contact dermatitis).

Lymphocytosis can be absolute and relative.

- absolute - is an increase in the absolute number of lymphocytes in 1 μ l of blood (more than 3000). It is a sign of lymphocytic leukemia. It is observed in chronic infections (tuberculosis, syphilis), whooping cough, smallpox.

relative - it is noted in the number of infections that occur with significant leukopenia due to inhibition of granulopoiesis (typhoid, flu). Lymphocytosis is called relative if, with a decrease in the total number of leukocytes, the absolute number of lymphocytes remains within the normal range, and their percentage in the leukocyte formula increases due to the reduction of other cells, for example, neutrophils.

- physiological - noted in children at an early age.

Myeloid leukemia is a disease belonging to the group of chronic leukemias.

This tumor predominantly neutrophilic Rostock myeloid tissue. In the expanded stage of the disease, the blood picture resembles a picture of bone marrow punctate. In the blood, there are all forms of granulocytes in different stages of maturation (single myeloblasts, promyelocytes, myelocytes, young and rod cells and Mature granulocytes). Frequent signs is an increase in the blood content of eosinophils and basophils (eosinophilic-basophilic Association). One of the most common diseases in the group of leukemias.

Monocytosis - an increase in the number of monocytes (macrophagocytes). It is observed in inflammatory processes in the recovery stage and in some acute infectious and viral diseases (typhoid fever, chickenpox, rubella, malaria, infectious mononucleosis, leishmaniasis). The

number of monocytes increases with the destruction of lymphatic tissue (lymphogranulomatosis).

Neutrophilia-an increase in the number of neutrophils in the blood. It is noted in acute infectious purulent-inflammatory processes, heart attacks, intoxications. The functional activity of neutrophils increases, in the assessment of neutrophil leukocytosis is important to determine the nuclear shift index.

Eosinophilia-an increase in the number of eosinophils in the blood. It is characteristic for allergic diseases, worm infestations, which is associated with the ability of eosinophils to neutralize histamine, the amount of which increases sharply with allergic reactions of the reagin type; the ability to secrete powerful proteolytic enzymes (mediators of eosinophils), destroying larvae of parasites that violate the vitality of adults.

Erythremia - (polycythemia Vera, a disease Wekesa) refers to the benign-quantitative myeloproliferative diseases. At the heart of the disease is leukemic proliferation of all three sprouts of hematopoiesis, especially red and megakaryocytic. The increased content of red blood cells and platelets in peripheral blood leads to a slowdown in blood flow, an increase in BCC, increased viscosity and blood clotting. The disease occurs mainly in elderly men.

PATHOPHYSIOLOGY OF HEMOSTASIS

Angiopathy is a form of hemorrhagic diathesis that occurs due to increased permeability of the vascular wall.

Hemocoagulation is the process of blood coagulation, which is carried out in 3 phases and is an enzymatic autocatalytic reaction, the preceding products of which catalyze the subsequent course of the reaction to the formation of a fibrin clot.

Hemorrhagic diathesis-a group of diseases characterized by a tendency to bleeding: angiopathy, thrombocytopathy, coagulopathy.

Hemorrhagic syndrome-a clinical condition characterized by prolonged non-stop bleeding.

Hemophilia is a hereditary disease caused by a deficiency of coagulation factors involved in the formation of plasma thromboplastin, related to phase I coagulopathy.

Gemorroyne state - the hereditary diseases associated with deficiency of coagulation factors involved in the formation of active thromboplastin (violation of internal and external clotting system) that are related to the coagulopathy of phase I.

Hypercoagulation is an excessive increase in blood clotting, which is expressed by an increase in the process of coagulation of proteins and thrombosis.

Hypocoagulation is a significant decrease in blood clotting, which is expressed by a weakening of the process of coagulation of proteins and the formation of a blood clot.

Coagulopathy-hemorrhagic diathesis, arising from a violation of the state of the blood coagulation system.