

## THE FIRST ANSWER IS CORRECT IN EACH QUESTION

A patient presents with decreased secretory function of the stomach, which is accompanied by anemia. What vitamin has anti-anemic action? (2020, N 23)

- +Cobalamin
- Nicotinic acid
- Tocopherol
- Retinol
- Thiamine

During the blooming season a 45-year-old woman developed acute inflammatory disease of her upper airways and eyes with hyperemia, edema, and mucous discharge. What type of leukocytosis is the most characteristic in this case? (2020, N 41)

- + Eosinophilia
- Monocytosis
- Basophilia
- Lymphocytosis
- Neutrophilia

A woman complains of palpitations, muscle weakness, and increased appetite. Objectively, she presents with thyroid gland enlargement. Hypersecretion of what hormone is likely in this case? (2020, N 53)

- + Thyroxine
- Cortisol
- Glucagon
- Calcitonin
- Aldosterone

After a physical exertion, a patient developed an angina pectoris attack due to myocardial ischemia. What statement corresponds the best with the definition of ischemia? (2020, N 77)

- + Imbalance between the needed and received blood supply to the tissues
- Dilation of the arterioles
- Decreased blood erythrocyte count
- Increased supply of the tissues with oxygen
- Oxygen deficiency in the circulatory system

A mountain-dweller has blood hemoglobin of 180 g/L. Increased hemoglobin synthesis in the conditions of chronic hypoxia occurs due to bone marrow stimulation with: (2020, N 91)

- Erythropoietin
- Adrenaline
- Thyroxine
- Vasopressin
- Noradrenaline

A 45-year-old woman diagnosed with fibromyoma developed microcytic hypochromic anemia due to profuse hemorrhages. What type of anemia is it, based on the mechanism of its development? (2020, N 99)

- +Iron-deficiency
- Protein-deficiency
- Folate-deficiency
- Aplastic
- Metaplastic

An intensive care unit received an unconscious patient diagnosed with diabetic ketoacidotic coma. What type of pathological respiration is characteristic of this condition? (2020, N 118)

- + Kussmaul respiration
- Biot respiration
- Gasping respiration
- Apneustic respiration
- Cheyne-Stokes respiration

A 38-year-old pregnant woman with uterine bleeding was brought into the admission room. What changes are likely to be observed in the blood of the woman in labor? (2020, N 127)

- +Decreased hematocrit
- Increased hematocrit
- Leukopenia
- Monocytosis
- Erythrocytosis

A patient complains of a pain in his right leg. During foot examination, his foot is pale, diminished in size, and exhibits a local decrease in temperature. What disturbance of local blood circulation is observed in this patient? (2020, N 139)

- +Ischemia
- Metabolic arterial hyperemia
- Neuroparalytic arterial hyperemia
- Venous hyperemia
- Neurotonic arterial hyperemia

During examination a patient that complained of edemas presents with proteinuria, arterial hypertension, hypoproteinemia, and retention hyperlipidemia. Name this syndrome; (2020, N 142)

- +Nephrotic
- Anemic
- Urate
- Hypertensive
- Urinary

In a closed garage, a driver was staying for a long time in his car, with the engine running. After a time he developed a headache and started vomiting. This condition is caused by formation of the following compound: (2020, N 143)

- +Carboxyhemoglobin
- Cyanmethemoglobin
- Myoglobin
- Deoxyhemoglobin
- Oxyhemoglobin

A patient with croupous pneumonia developed body temperature up to 40 °C. What type of body temperature is it, based on its elevation? (2020, N 120)

- +High
- Subfebril
- Hyperpyretic
- Moderated
- 

Gastric secretory function of a patient was analyzed. No hydrochloric acid and enzymes were detected in the gastric juice of the patient. Name this condition: (2020, N 132)

- +Achyilia
- Hyperchlorhydria
- Hypochlorhydria
- Achlorhydria
- Hypoaciditas

A couple came to the genetic consultation for their newborn child to be examined. Karyotype test detects an additional chromosome in the 21 pair. What diagnosis can be made? (2020, N 10; 2019, N 68)

- +Down syndrome
- Turner syndrome
- Edwards syndrome
- Patau syndrome
- Klinefelter syndrome

A patient, who lives in the area with specific geochemical conditions, was diagnosed with endemic goiter. What microelement deficiency results in development of this pathology? (2020, N 16; 2018, N 53)

- +I
- Cl
- Br
- F
- Na

During lancing an abscess in the oral cavity, it produces a yellow-green discharge. What cells are always present and predominant in the purulent exudate? (2020, N 21; 2019, N 133)

- +Neutrophils
- Erythrocytes
- Eosinophils
- Basophils
- Lymphocytes

A 25-year-old man has an appointment with the dentist. Several minutes after his oral cavity was lavaged with furacilin (nitrofurazone) the patient developed significant labial edema. What type of allergic reaction is observed in this case? (2020, N 101; 2018, N 71)

- +Anaphylactic
- Delayed-type hypersensitivity
- Cytolytic
- Stimulated
- Immune complex

An injured person exhibits the following signs at the site of trauma: skin redness, throbbing small arteries, elevated local temperature, increased tissue turgor. What local blood circulation disorder are these presentations typical of? (2020, N 148; 2017; 2016, N 26, TB; 2013)

- +Arterial hyperemia
- Venous hyperemia
- Thrombosis
- Embolism
- Ischemia

The dispensing chemist after conducting a lengthy analysis (psychoemotional stress) developed elevated blood pressure (160/110 mm Hg). What changes in the neurohumoral regulation can be the cause of blood pressure elevation in this case? (2020, N 141; 2014, N 133, TB)

- +Sympathoadrenal system activation
- Activation of aldosterone synthesis and secretion
- Renin-angiotensin system activation
- Kallikrein-kinin system activation
- Sympathoadrenal system inhibition

A patient develops prolonged hemorrhages and hemorrhages into the muscles and joints as a result of any microtraumas. In the blood there is a deficiency of the VIII plasma factor of blood coagulation. What disease of blood system is observed in this patient? (2019, N1)

- +Hemophilia A
- Iron-deficiency anemia

B<sub>12</sub> and folate deficiency anemia  
 Thrombocytopenic purpura  
 Vaquez disease (polycythemia vera)

A patient has developed anuria. Blood pressure is 50/20 mm Hg. What process of uropoiesis was disturbed resulting in acute decrease of urine output? (2019, N3)

+Glomerular filtration

Obligate reabsorption

Tubular secretion

-

Facultative reabsorption

After a surgery the patient presented with a severe pain syndrome. What change in the patient's hormonal status is most likely in this case? (2019, N 5)

+Increased catecholamine production

Decreased ACTH production

Deceased production of glucocorticoids

Insulin hypersecretion

Decreased production of mineralocorticoids

What is the mechanism of indirect action of ionizing radiation on cells? (2019, N 18)

+Formation of large amount of free radicals

Chromosome rupture

Swelling of organelles

Formation of large amount of free radicals

Activation of protein biosynthesis

Damage to the cytoplasmic membrane

A patient suffers from diarrhea, dermatitis, and dementia. What vitamin is likely to be deficient in this patient, causing the patient's condition? (2019, N 19)

+Nicotinic acid

Vitamin D

Retinol

Tocopherol

Vitamin K

A 23-year-old man came to the infectious diseases department with complaints of abdominal distension and diarrhea. He was diagnosed with lamblia. What type of leukocytosis is characteristic of this disease? (2019, N 25)

+Eosinophilic

Basophilic

Monocytic

Lymphocytic

Neutrophilic

A man received a radiation dose of 30 Gy. He presents with necrotic angina, disorders of the gastrointestinal tract. Blood tests revealed anemia, leukopenia and thrombocytopenia. What stage of acute radiation sickness is observed in the patient? (2019, N 26)

+Manifest illness stage

Latent stage

Prodromal stage

-

Recovery

An unconscious patient was brought into the intensive care unit. Acetone breath, acute hyperglycemia, and ketonemia are detected. What complication of diabetes mellitus occurred in this case? (2019, N 39)

+Diabetic coma

Nephritis

Hypoglycemic coma

Acute acetone poisoning

Cataract

To reproduce Ehrlich carcinoma in rabbit, a certain amount of benzpyrene (polycyclic aromatic hydrocarbon) was daily applied to a dehaired patch of skin of the animal. What method is used for tumor modelling in this case? (2019, N 40)

+Induction

Transplantation

Explantation

Ionizing radiation

Hormone administration

Examination of a 45-year-old man, who for a long time kept to a vegetarian plant-based diet, revealed him to have negative nitrogen balance. What peculiarity of his diet has caused such developments? (2019, N 59)

+Insufficient protein content

Insufficient fat content

Insufficient vitamin content

Excessive carbohydrate content

Excessive water content

A 42-year-old patient is present with skin pallor, weakness, and enlarged lymph nodes. In peripheral blood: leukocytosis, no intermediate forms of leukocytes ("leukemic hiatus"), accelerated ESR. Which disease can be suspected in this case?

+Acute leukemia

Neutrophilic leukocytosis

Chronic leukemia

Erythromyelosis

Leukemoid reaction

People, who were in the building during a fire, suffer from carbon monoxide poisoning. What type of hypoxia can be observed in this case? (2019, N 77)

+Hemic

Hypoxic

Respiratory

Circulatory

Tissue

A 54-year-old man requested a pharmacist's advice on drug prescription. The patient has 4-year-long history of chronic glomerulonephritis and 2-year-long history of persistent hypertension. What substance synthesized in the kidneys has important role in development of arterial hypertension? (2019, N 77)

+Renin

Aldosterone

Catecholamines

Histamine

Nitric oxide

I.I. Mechnikov, when studying inflammatory process, described a certain order that is characteristic of leucocytes migration to the inflammation focus. The cells emigrate to the focus in the following order: (2019, N 85)

+Neutrophilic granulocytes, monocytes, lymphocytes

Monocytes, lymphocytes, neutrophilic granulocytes

Neutrophilic granulocytes, lymphocytes, monocytes

Monocytes, neutrophilic granulocytes, lymphocytes

Lymphocytes, monocytes, neutrophilic granulocytes

A 55-year-old man came to a doctor with complaints of acute pain in his big toes. Meat and wine are a permanent fixture in his diet. The doctor suspects gout. What substance must be measured in the patient's blood to confirm this diagnosis? (2019, N 98)

+Uric acid

Lactate

Ketone bodies

Bilirubin

Urea

A patient is diagnosed with acute pancreatitis. For diagnostic purpose it is necessary to measure the activity of the following enzyme in the patient's blood: (2019, N 120)

+Amylase

Creatine kinase

Aldolase

LDH

Pepsin

A patient complains of polyuria. Urine test detects no pathologic components, but urine specific gravity is abnormally low. What hormone secretion is likely to be disturbed in this patient? (2019, N 121)

- +Vasopressin
- Insulin
- Thyrotropin
- Somatotropin
- Cortisol

One hour after a child took polyvitamin in the dosage form of syrup, the child developed a markedly itching urticaria-type rash all over the body. What type of allergic response can be characterized by this sign? (2019, N 122)

- +Anaphylactic
- Delayed-type hypersensitivity
- Immune complex
- Cytotoxic
- Autoallergic

After a physical exertion a person develops extra (premature) cardiac contractions. What type of arrhythmia is it? (2019, N 123)

- +Extrasystole
- Sinus tachycardia
- Sinus bradycardia
- Paroxysmal tachycardia
- Ventricular fibrillation

A 9-year-old child due to acute bronchitis developed elevated body temperature up to 38,5°C that lasted for a week and was then followed by a drop in the temperature down to 37°C. What mechanism is leading at the 3rd stage of fever? (2019, N 130)

- +Peripheral vasodilation
- Development of chills
- Increased heat production
- Increased diuresis
- Increased respiration rate

A 50-year-old patient in a poor condition was presented to the hospital. Objectively, the skin and visible mucous membranes are cyanotic, arterial blood saturation – 88%, NiBP – 90/60 mm Hg, pulse is 117 per minute, respiratory rate is 22 per minute. From the history it is known that the patient suffers from chronic heart failure. Which of the following types of hypoxia is most likely to develop in this case? (2019, N 155)

- +Circulatory
- Hypoxic
- Hemic
- Tissue



## Anemic

On X-ray examination of the 59-year-old patient, in the lower lobe of the right lung there was detected a distinct shadow, differential for tumor. It was pre-determined that the tumor is benign. Which of the following features characterized the tumor as benign? (2019, 170)

+Expansive growth

Metastasis

Cancer cachexia

Invasion in surrounding tissues

Infiltrating growth

A 49-year-old woman who suffers from diabetes for a long time has weakness, paleness, palpitation, anxiety, double vision, numbness of lips and the tip of the tongue after insulin administration. The blood glucose level is 2.5 mmol/l. Which of the following complication does this patient develop? (2019, N 173)

+Hypoglycemic coma

Uremic coma

Hyperosmolar coma

Hyperketonemic coma

Hyperglycemic coma

The patient is presented to the hospital with the phenomena of growing respiratory failure. He has clinical signs of bilateral subtotal pneumonia. The clinical diagnosis is confirmed by X-ray examination. What type of respiratory failure does this patient most likely have? (2019, N 179)

+Restrictive

Peripheral

Thoracic diaphragm

Obstructive

Central

A patient suffers from Down's disease that manifests as mental retardation, shortness of stature, pathologically short fingers and toes, and eyes with mongoloid slant. Karyotype analysis revealed trisomy 21. What group of diseases does this pathology belong to? (2018, N 3)

+Chromosomal disorders

Molecular genetic disease

Gametopathy

Fetopathy

Blastopathy

Hormones regulate numerous metabolic processes. What hormone activates glycogen synthesis? (2018, N 4)

+Insulin

Adrenaline

Vasopressin  
Thyroxine  
Oxytocin

A patient has developed anuria. Blood pressure is 50/20 mm Hg. What process of uropoiesis was disturbed resulting in acute decrease of urine output? (2018, N 21)

+Glomerular filtration  
Obligate reabsorption  
Facultative reabsorption  
Tubular secretion  
—

A 12-year-old boy is of short stature, but his mental development corresponds with that of his age group. What hormone deficiency is the most likely to cause this pathology? (2018, N 22)

+Somatotropin  
Insulin  
Oxytocin  
Vasopressin  
Adrenaline

A 10-year-old child has height of 178 cm and body mass of 67 kg. These presentations are caused by the functional disturbance of the: (2018, N 23)

+Pituitary gland  
Thyroid gland  
Gonads  
Adrenal glands  
Parathyroid glands

Any damage to the patient's vessels results in persistent hemorrhage. Blood clotting factor VIII is deficient in the patient's blood. What disease does this patient suffer from? (2018, N 33)

+Hemophilia  
Acute vascular purpura  
Thrombocytopenic purpura  
Anemia  
Radiation sickness

To induce diabetes mellitus in a rabbit,  $\beta$ -cells of pancreatic islets (islets of Langerhans) were selectively damaged with alloxan. What method of diabetes induction was used in this experiment? (2018, N 36)

+Shutdown  
Irritation  
Introduction of enzymes, hormones  
Isolated organs  
Stimulation

A patient presents with persistent tachycardia, exophthalmos, high excitability, increased basal metabolic rate. What disorder can lead to the development of this syndrome? (2018, N 39)

- +Hyperthyroidism
- Hypoparathyroidism
- Hypothyroidism
- Hyperparathyroidism
- Adrenal hypofunction

On examination the patient's sclera and oral mucosa are icteric. What biochemical blood value can be expected to be increased? (2018, N 59)

- +Bilirubin
- Amylase
- Glucose
- Albumin
- Cholesterol

A patient with gastric carcinoma has undergone several courses of radiation therapy. What system is the first to become functionally disturbed after the body was exposed to ionizing radiation? (2018, N 72)

- +Blood
- Nervous
- Digestive
- Urinary
- Respiratory

During regular check-up a patient presents with enlarged thyroid gland, exophthalmos, increased body temperature, heart rate up to 110/min. What hormone should be measured in the patient's blood in this case? (2018, N 76)

- +Thyroxin
- Testosterone
- Glucagon
- Insulin
- Cortisol

Insulin production in  $\beta$ -cells involves many substances. What substance gives the main signal for insulin synthesis when its concentration changes? (2018, N 80)

- +Glucose
- Carbon dioxide
- Heparin
- Hemoglobin
- Urea

An ophthalmologist has detected increased time of dark adaptation in a patient. What vitamin deficiency can result in such symptom? (2018, N 82)

+A  
C  
K  
B1  
B6

When working in the garden, a man accidentally cut his hand. The wound remained untreated. Shortly after that the wounded area developed inflammation with accumulation of exudate that contained numerous viable and degenerate neutrophils. What type of exudate is it? (2018, N 89)

+Purulent  
Serous  
Fibrinous  
Hemorrhagic  
Catarrhal

A patient presents with persistent fever, with the difference between evening and morning temperature not exceeding 1°C. What type of fever curve is present in this patient? (2018, N 90)

+Continuous  
Remittent  
Hectic  
Recurrent  
Intermittent

Ultraviolet irradiation is used in medicine in various physiotherapeutic procedures. What mechanism of medicinal action is characteristic of ultraviolet rays? (2018, N 99)

+Activation of vitamin D synthesis  
Activation of drug action  
Decrease of melanin synthesis in the skin  
Intensification of cell division  
Activation of lipid peroxidation

A patient has a gallstone lodged in the common bile duct, which blocks bile supply to the intestine. What digestive process will be disturbed in this case? (2018, N 101)

+Fat digestion  
Protein absorption  
Carbohydrate digestion  
Carbohydrate absorption  
Protein digestion

A 46-year-old patient presents with hyperactivity of creatine kinase in his blood serum. What pathology can be suspected? (2018, N 103)

+Myocardial infarction

Acute pancreatitis  
 Chronic hepatitis  
 Hemolytic anemia  
 Renal failure

A patient is pale, has goose bumps and chills. What stage of fever is it characteristic of? (2018, N 106)

+Temperature increase  
 Temperature decrease  
 Continuous fever  
 Compensation  
 Latent stage

Ascarids were detected in a sick child. What changes in leukogram will be the most characteristic of helminthiasis? (2018, N 107)

+Eosinophilia  
 Basophilia  
 Neutrophilia  
 Lymphocytosis  
 Monocytosis

A man received a radiation dose of 30 Gy. He presents with necrotic angina and disorders of the gastrointestinal tract. Blood tests revealed anemia, leukopenia and thrombocytopenia. What stage of acute radiation sickness is observed in the patient? (2018, N 108)

+Manifest illness stage  
 Prodromal stage  
 Latent stage  
 Recover–

A patient suffers from hyperchromic B<sub>12</sub>-deficiency anemia. What vitamin preparation should be prescribed in this case? (2018, N 122)

+Cyanocobalamin  
 Riboflavin  
 Vicasol (Menadione)  
 Thiamine chloride  
 Retinol acetate

After a traffic accident the driver presents with increased blood glucose. What mechanism leads to hyperglycemia in this case? (2018, N 125)

+Sympathoadrenal system activation  
 Increased production of somatotrophic hormone  
 Decreased production of insulin  
 Decreased production of glucagon  
 Decreased tone of parasympathetic nervous system

Examination of a 45-year-old man, who for a long time kept to a vegetarian plant based diet, revealed him to have negative nitrogen balance. What peculiarity of his diet has caused such developments? (2018, N 132)

+Insufficient protein content

Insufficient fat content

Insufficient vitamin content

Excessive water content

Excessive carbohydrate content

After severe emotional strain a 53-year-old man suddenly developed acute pain in the heart area, which irradiates to the left hand, to the neck, and under the left scapula. He noted numbness of his left hand. His face is pale and covered in cold sweat. Nitroglycerine administration stopped the pain attack after 10 minutes had passed. What is the most likely disease in this case? (2018, N 133)

+Angina pectoris

Stroke

Myocardial infarction

Pulmonary embolism

Somatoform autonomic dysfunction

During ultrasound investigation a patient was diagnosed with bilateral renal artery stenosis of atherosclerotic genesis. Specify the bioactive substance that due to its excessive secretion is the key component of arterial hypertension pathogenesis in the given case: (2018, N 138)

+Renin

Cortisol

Vasopressin

Noradrenaline

Thyroxin

At the end of his shift a worker of the steel foundry felt dizziness, his body temperature increased to 38.50C. What condition does he present with? (2018, N 143)

+Hyperthermia

Decompression

Fever

Hypothermia

Hypertension

A patient in the state of ketoacidotic coma presents with loud rapid respiration: labored expiration with tension of expiratory muscles occurs after deep inspiration. Name this type of pathologic respiration (2018, N 157)

+Kussmaul's

Cheyne-Stokes'

Gasping

Stenotic

Biot's

A woman complains of itching lips; they are reddened and covered in scabs and scales after she had been using new lipstick for two weeks. What allergic reactions result in this kind of disorders? (2018, N 169)

+Delayed

Cytotoxic

Immune complex

Anaphylactic

Stimulating

What ion increases osmotic pressure in the focus of inflammation? (2018, N 188)

+Potassium

Calcium

Fluorine

Magnesium

Chlorine

A 55-year-old man came to a doctor with complaints of acute pain in his big toes. Meat and wine are a permanent fixture in his diet. The doctor suspects gout. What substance must be measured in the patient's blood to confirm this diagnosis? (2018, N 189)

+Uric acid

Urea

Lactate

Bilirubin

Ketone bodies

Upon examination the ophthalmologist diagnosed a 21-year-old woman with visual impairment - hemeralopia ("night blindness"). What drug should this patient take to restore her vision? (2018, N 193)

+Retinol acetate

Ergocalciferol

Suprastin (Chloropyramine)

Cholecalciferol

Sustac forte (Nitroglycerin)

Parents of a 10-year-old child have made an appointment with an endocrinologist due to complaints of the child's low height. The child's appearance is corresponding with that of a 5-yearold. What hormone causes such changes in physical development, if its secretion is disturbed? (2017; 2016, N 16, TB; 2014, N 7, TB)

+Somatotrophic hormone

Adrenocorticotrophic hormone

Thyroxin

Testosterone

## Insulin

A person has been stung by a bee. The stung area developed redness and edema. What is the main mechanism of edema development? (2017)

+Increased permeability of the capillaries

Decreased oncotic blood pressure

Increased hydrostatic blood pressure

Decreased osmotic blood pressure

Disturbed lymphatic efflux

Nicotinic acid amide fulfills important metabolic function. What disorder develops, when it is deficient in the organism? (2017)

+Pellagra

Rickets

Anemia

Xerophthalmia

Beriberi

A patient was delivered into a resuscitation unit with signs of alcohol poisoning. The patient developed hypoxia of the following pathogenesis: (2017)

+Tissue

Hypoxic

Hemic

Circulatory

Mixed

Prolonged taking of cytostatic agents resulted in development of necrotic tonsillitis in the patient. It can be associated with the following changes in the leukocyte content: (2017)

+Agranulocytosis

Neutrophilic leukocytosis

Lymphopenia

Eosinopenia

Lymphocytosis

A patient with type I diabetes mellitus developed hyperketonemic coma. What acid-base imbalance will be observed in the patient? (2017)

+Nongaseous acidosis

Gaseous acidosis

Nongaseous alkalosis

Gaseous alkalosis

There will be no acid-base imbalances

Hyperlipemia can be observed in 2-3 hours after eating fatty food. 9 hours later lipid content normalizes again. How can this condition be characterized? (2017)

+Alimentary hyperlipemia



Transport hyperlipemia  
 Hyperplastic obesity  
 Retention hyperlipemia  
 Hypertrophic obesity

A patient presents with icteric sclera and mucous tunics; urine is dark; feces are light-colored. Blood content of direct and indirect bilirubin is increased, urine content of direct bilirubin is increased. What pathology can be characterized by these signs? (2017)

+Obstructive jaundice  
 Hemolytic jaundice  
 Hepatocellular jaundice  
 Jaundice of the newborn  
 Atherosclerosis

The patient presents with rapid growth of a tumor node and its progressing malignization. What stage of tumor growth can be characterized by these presentations? (2017)

+Progression  
 Promotion (activation)  
 Transformation  
 Exudation  
 Inactivation

A 55-year-old man, who had been suffering from mitral insufficiency for many years, developed acute heart failure. What pathophysiological type of heart failure can be observed in this case? (2017)

+Due to cardiac overload  
 Due to hypoxic damage to the heart  
 Due to coronarogenic damage to the heart  
 Due to neurogenic damage to the heart  
 Due to acute cardiac tamponade

Cataract (lenticular opacity) has developed in a 52-year-old woman with diabetes mellitus. Lenticular opacity was caused by intensification of the following processes: (2017; 2016, N 125, TB; 2015, N 128, TB)

+Protein glycosylation  
 Lipolysis  
 Ketogenesis  
 Protein proteolysis  
 Gluconeogenesis

A patient suffers from hyperchromic B<sub>12</sub>-deficiency anemia. What vitamin preparation should be prescribed in this case? (2017)

+Cyanocobalamin  
 Riboflavin

Vicasol (Menadione)  
 Thiamine chloride  
 Retinol acetate

A 54-year-old man requested a pharmacist's advice on drug prescription. The patient has 4-year-long history of chronic glomerulonephritis and 2-yearlong history of persistent hypertension. What substance synthesized in the kidneys has important role in development of arterial hypertension? (2017)

+Renin  
 Nitric oxide  
 Aldosterone  
 Histamine  
 Catecholamines

A patient complains of general weakness, muscle weakness in the extremities (if the patient is asked to make a fist several times in a row, for example, the patient is capable of doing it only once), facial muscles are weak, swallowing is disturbed. Administration of acetylcholinesterase drugs removes these disturbances to a certain degree. Determine the pathology: (2017)

+Myasthenia  
 Paralysis  
 Paresis  
 Hemiplegia  
 Monoplegia

A 71-year-old woman developed mechanical jaundice due to obstruction of the bile duct with a chololith. Decrease of blood pressure and bradycardia are detected. These changes in functioning of the patient's cardiovascular system are caused by increased blood content of the following substance: (2017)

+Bile acids  
 Direct bilirubin  
 Indirect bilirubin  
 Urobilin  
 Stercobilin

A 5-year-old child presents with abdominal distension, abdominal cramps, and diarrhea occurring 1-4 hours after drinking milk. Described symptoms are caused by the lack of enzymes that break up: (2017; 2015, N 154, TB)

+Lactose  
 Glucose  
 Maltose  
 Saccharose  
 Fructose

During routine preventive examination the local pediatrician noticed a boy of short stature. Mental development of the child corresponds with his age. What endocrine disorder is it? (2017)

+Pituitary nanism

Cretinism

Acromegalia

Gigantism

Rickets

A 25-year-old-patient with the II degree thermal burns came to a doctor. Objectively: there are large blisters on the upper limbs; the blisters are filled with clear exudate containing mostly water and albumines with isolated leukocytes. Name the type of the exudate: (2017)

+Serous

Catarrhal (mucous)

Fibrinous

Purulent

Hemorrhagic

A patient with brain edema presents with respiration that is characterized by periods of several respiratory movements of equal amplitude alternating with periods of apnea. What pathologic respiration is it characteristic of? (2017)

+Biot's respiration

Gasping respiration

Apneustic respiration

Cheyne-Stokes' respiration

Kussmaul's respiration

A patient in the state of ketoacidotic coma presents with loud rapid respiration: labored expiration with tension of expiratory muscles occurs after deep inspiration. Name the type of pathologic respiration: (2017; 2016, N 192, TB)

+Kussmaul's

Cheyne-Stokes'

Gasping

Stenotic

Biot's

In 9 days after administration of a therapeutic serum the patient developed urticaria, itching, edemas, and lymph nodes enlargement. What type of allergic reaction has occurred in the patient? (2017)

+Immune complex

Cytotoxic

Anaphylactic

Stimulating

Cellular

Exudation is characteristic of inflammation. What factors cause exudation and local edema of the inflamed area? (2017)

+Increased permeability of vessel wall

Hyperglycemia

Ischemia

Leukocyte adhesion to endothelial cells

Decreased permeability of vessel wall

A 55-year-old man came to a doctor with complaints of acute pain in his big toes. Meat and wine remain permanently in his diet. The doctor suspects gout. What substance must be measured in the patient's blood to confirm this diagnosis? (2017)

+Uric acid

Urea

Lactate

Bilirubin

Ketone bodies

The patient's large-focal myocardial infarction is complicated with pulmonary edema. What disturbance of cardiohemodynamics contributed to the pulmonary edema development? (2017)

+Acute left ventricular failure

Acute right ventricular failure

Autoimmune myocarditis

Cardiogenic shock

Reperfusion syndrome

A patient has developed anuria. Blood pressure is 50/20 mm Hg. What process of uropoiesis caused acute decrease of urination? (2016, N 5, TB)

+Glomerular filtration

Obligate reabsorption

Facultative reabsorption

Tubular secretion

In an emergency situation a scuba diver has quickly risen from the depth to the surface in violation of safety regulations. He is unconscious, presents with respiratory failure and cardiac activity disorder as the result of decompression sickness. What complication can develop in the scuba diver? (2016, N 15, TB) (2015, N 12, TB)(2013, 2012)

+Gas embolism

Fat embolism

Air embolism

Cellular embolism

Thromboembolism

A patient complains of tachycardia, insomnia, weight loss, irritability, sweating.

Objectively: the patient has goiter and slight exophthalmos. What gland is affected, and what functional disorder is it? (2016, N17, TB)

+Hyperthyroidism

Hypothyroidism

Hyperparathyroidism

Hypoparathyroidism

Adrenomedullary hyperfunction

A patient has been hospitalised with pneumonia. What kind of respiratory failure does the patient have? (2016, N 19, TB)

+Restrictive

Obstructive

Central

Peripheral

Thoracic diaphragm

In the state of fright the following signs can be observed: acute pallor of face, tremor of extremities. What kind of ischemia can be observed in such a condition? (2016, N 20, TB)

+Angiospastic

Compression

Obstructive (thrombus)

Metabolic

Obstructive (vascular wall thickening)

At the sixth month of pregnancy a woman has been diagnosed with severe iron-deficiency anemia. Appearance of the following elements in her blood became the diagnostic character: (2016, N 35, TB) (2015, N 37, TB)

+Hypochromic erythrocytes

Macrocytes

Megalocytes

Reticulocytes

Erythroblasts

An ophthalmologist has detected increased time of dark adaptation in a patient. What vitamin deficiency can result in such symptom? (2016, N 81, TB)

+A

C

K

B1

B6

A 70-year-old patient presents with cardiac and cerebral atherosclerosis. Examination revealed changes of blood lipid spectre. Increase of the following lipoproteins plays a significant role in atherosclerosis pathogenesis: (2016, N 82, TB)

- +Low-density lipoproteins
- Very low-density lipoproteins
- Intermediate density lipoproteins
- High-density lipoproteins
- Chylomicrons

During containment measures following Chornobyl Nuclear Power Plant disaster a worker has been exposed to a dose of ionizing emission of 6 Gy (600 R). The worker complains of general fatigue, nausea, dizziness, labile blood pressure and heart rate, short-term leukocytosis with lymphopenia. What stage of acute radiation sickness can be characterized by such presentations? (2016, N 83, TB)

- +Prodromal
- Manifest
- Latent
- Recovery
- Long-term consequences

A woman noticed that a cut on her skin was still bleeding even after 20 minutes had passed. What vitamin deficiency causes such condition? (2016, N 88, TB) (2015, N 83, TB)

- + Vitamin K
- Vitamin A
- Vitamin D
- Vitamin E
- Vitamin B12

An elderly man exhibits low levels of red blood cells and hemoglobin in blood; however, his color index is 1,3. Blood smear analysis revealed megaloblasts. What type of anemia is observed in this case? (2016, N 98, TB)

- +B12-folic acid deficiency
- Iron-deficiency
- Acquired hemolytic
- Hereditary hemolytic
- Chronic posthemorrhagic

After drinking milk a 1-year-old child developed diarrhea, flatulence. The baby is likely to have deficiency of the following enzyme: (2016, N 100, TB) (2015, N 94, TB)

- +Lactase
- Maltase
- Aldolase
- Hexokinase
- Glycosidase

A patient with alcoholic cirrhosis complains of general weakness and dyspnea. The following is revealed: decrease of blood pressure, ascites, dilation of superficial veins of the stomach anterior wall, esophageal varicose veins dilatation, splenomegaly. What hemodynamics disorder does the patient suffer from? (2016, N 111, TB) (2015, N 104, TB) (2014, N 134, TB)(2012)

+Portal hypertension

Left ventricular failure

Right ventricular failure

Cardiac insufficiency

Collapse

A patient has icteric skin; unconjugated bilirubin content in blood is high; conjugated bilirubin in urine is not detected. There is significant amount of urobilin in urine and stercobilin in feces. Name the pathology characterized by given symptoms: (2016, N118, TB) (2015, N 117, TB) (2014, N 155, TB)

+Hemolytic jaundice

Obstructive jaundice

Jaundice of the newborn

Hepatocellular jaundice

Atherosclerosis

A 46-year-old patient was found to have hyperactivity of creatine kinase in the blood serum. What pathology can be suspected? (2016, N 121, TB) (2015, N 124, TB)

+Myocardial infarction

Acute pancreatitis

Chronic hepatitis

Hemolytic anemia

Renal failure

A patient with pulmonary carcinoma has developed a case of pleurisy. Large amount of hemorrhagic exudate was obtained for analysis. What component is specific for hemorrhagic exudate? (2016, N 123, TB)

+Erythrocytes

Leukocytes

Platelets

Fibrin

Pus

A man received a radiation dose of 30 Gy. He presents with necrotic angina, disorders of the gastrointestinal tract. Blood tests revealed anemia, leukopenia and thrombocytopenia. What stage of acute radiation sickness is observed in the patient? (2016, N 127, TB)

+Manifest illness stage

Prodromal stage

Latent stage

Recovery

-

A patient with croupous pneumonia presents with sharp increase of body temperature up to 39°C, which persisted for 9 days with daily amplitude of 1 degree. What temperature curve could be observed? (2016, N 129, TB)

+Stable

Hectic

Septic

Recurrent

Atypical

A patient of a neurology unit suffers from paralysis of all limbs. Name this condition: (2016, N 158, TB)

+ Tetraplegia

Paraplegia

Hemiplegia

Paresis

Hypodynamia

The most severe and dangerous complication of diabetes mellitus is hypoglycemic coma that is characterized by loss of consciousness and is lethal, unless efficient emergency treatment is received by patient. What is the main pathogenetic component of hypoglycemic coma? (2016, N 159, TB)

+Carbohydrate deficiency and low energy of cerebral neurons

Carbohydrate deficiency and low energy of myocardium cells

Blood hyperosmia

Noncompensated ketoacidosis

Respiratory alkalosis

A woman complains of nausea, vomiting, skin itch. She was diagnosed with mechanical jaundice. What is the possible cause of skin itch in such a condition? (2016, N 165, TB)

+Bile acids accumulating in the blood

Increased blood content of indirect bilirubin

Cholesterol accumulating in the blood

Direct bilirubin appearing in the blood

Erythrocyte disintegration products accumulating in the blood

During ultrasound investigation a patient has been diagnosed with bilateral stenosis of renal artery with atherosclerotic genesis. Specify the bioactive substance that due to its excessive secretion is the key component of arterial hypertension pathogenesis in the given case: (2016, N 168, TB) (2015, N 159, TB)

+Renin

Cortisol

Vasopressin



Noradrenaline

Thyroxin

Modelling of immobilization stress is performed on a test animal – guinea pig – that starved for a day. Dissection revealed hyperemic gastric mucosa with multiple erosions. What theory of ulcer formation is confirmed by this test? (2016, N 188, TB)

+Corticovisceral (stress)

Vascular

Inflammatory

Mechanical

Peptic

A 40-year-old man presents with rapid weight gain after he had suffered a severe craniocerebral trauma. On examination the patient's weight was 125 kg, with his height being 175 cm. What mechanism of obesity development is the most likely in this case? (2016, N 195, TB) (2015, N 195, TB)

+Hypothalamic

Alimentary

Hormonal

Hereditary

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