

Module 1.

Morphology and Physiology of Microorganisms. Infection. Immunity.

Organization of bacteriological laboratory. Aniline dyes and simple staining methods of microorganisms. Microscopy methods.

Microscopy of a smear obtained from a patient with acute purulent periostitis revealed gram-positive bacteria arranged in clusters resembling bunch of grapes. What microorganisms is this morphology typical for?

Staphylococci

Sarcina

Tetrads

Streptococci

Candida fungi

Morphology and structure of bacteria. Differential method of staining bacteria by Gram.

There are several cases of children from boarding school suffering from sore throat. Microscopy of tonsil smears stained according to Neisser method has revealed thin yellow bacilli with dark brown grains on their ends placed in the shape of Roman numeral five. What infection can be suspected in this case?

Diphtheria

Infectious mononucleosis

Listeriosis

Tonsillitis

Scarlet fever

A patient being treated in the burns department has suppurative complication. The pus is of bluish-green colour that is indicative of infection caused by *Pseudomonas aeruginosa*. What factor is typical for this causative agent?

Gram-negative stain

Mycelium formation

Presence of spores

Cell pairing

Coccal form

Sputum smears of a patient with chronic pulmonary disease were stained by Ziehl-Neelsen method and analyzed in the bacteriological laboratory. Microscopy revealed red bacillus. What property of tuberculosis myobacteria was found?

Acid resistance

Alkali resistance

Alcohol resistance

Encapsulation

Spore-formation

A child is presumably ill with diphtheria. A specimen of affected mucous membrane of his pharynx was taken for analysis. The smear was stained and microscopical examination revealed yellow rods with dark blue thickenings on their ends. What structural element of a germ cell was revealed in the detected microorganisms?

Volutin granules

Plasmids

Capsule

Flagella

Spores

Specimen of a patient's sputum was stained with the following dyes and reagents: Ziehl's solution, methylene blue solution, 5% solution of sulfuric acid. What staining method was applied?

Ziehl-Neelsen

Burri's

Gram's

Peshkov's

Neisser's

Microscopy of smear preparation stained with methylene blue revealed bacilli with clublike expansions on their ends similar to *C. diphtheriae*. What additional method of staining should be used to verify this assumption?

Neisser

Kozlovsky

Ziehl-Neelsen

Zdrodovsky

Aujeszky

Morphology and structure of spirochetes, actinomycetes, fungi and protozoa.

Methods of studying their morphology.

After long-term antibiotic treatment a patient has developed whitish spots on the oral mucosa. Gram-positive oval budding cells were detected in the smear preparations. What causative agents were detected?

Candida fungi

Staphylococci

Tetracocci

Sarcinae

Actinomycete

Microscopic examination of pus sample taken from mandibular fistula canal and stained by Gram's method has revealed druses with gram-positive coloring in the center and cone-shaped structures with gram-negative coloring. Such morphology is characteristic of the agent of:

Actinomycosis

Candidiasis

Anaerobic infection

Staphylococcal osteomyelitis

Fusobacteriosis

A patient's preliminary diagnosis is toxoplasmosis. What material was used for diagnostics of this disease?

Blood

Feces

Urine

Duodenal contents

Sputum

A patient with suspected liver abscess was admitted to the surgical department. The patient had been staying for a long time on business in one of african countries and fell repeatedly ill with acute gastroi-ntestinal disorders. What protozoal disease may the patient be now ill with?

Amebiasis

Trypanosomosis

Leishmaniasis

Malaria

Toxoplasmosis

A man is ill with a protozoan disease characterized by cerebral affection and loss of sight. Blood analysis revealed half-moon-shaped unicellular organisms with pointed ends. This disease is caused by:

Toxoplasma

Amoeba

Trichomonad

Lambliia

Leishmania

A pregnant woman applied to a doctor with complaints typical for toxoplasmosis. The doctor took a sample of her blood. What serological tests should be performed in this case?

Complement binding assay

Precipitation test

Wassermann test

Widal's test

Neutralization test

Among public catering workers examined by doctors of sanitary-and-epidemiologic station often occur asymptomatic parasite carriers. This means that a healthy person carries cysts that infect other people. Such parasitizing is impossible for the following causative agent:

Dysenteric amoeba

Intestinal trichomonad

Malarial plasmodium

Viscerotropic leishmania

Dermatotropic leishmania

Examination of a man revealed a protozoan disease that affected brain and caused vision loss. Blood analysis revealed unicellular half-moon-shaped organisms with pointed ends.

The causative agent of this disease is:

Toxoplasma

Leishmania

Amoeba

Lambliia

Trichomonad

A female patient has symptoms of inflammation of urogenital tracts. A smear from the vaginal mucous membrane contained big unicellular pyriform organisms with a sharp

spike on the back end of their bodies; big nucleus and undulating membrane. What protozoa were revealed in the smear?

Trichomonas vaginalis

Trichomonas buccalis

Trichomonas hominis

Trypanosoma gambiense

Lamblia intestinalis

A married couple applied to the genetic consultation in order to consult about their child with multiple abnormalities (microcephaly, idiocy etc). The woman has had an illness during her pregnancy but she didn't take any teratogens or mutagens. The parents' and the child's karyotype is normal. Anamnesis study revealed that the family kept a cat. What gravidic disease caused the child's abnormalities?

Toxoplasmosis

Balantidiasis

Dysentery

Leishmaniasis

Trichomoniasis

While examining a blood smear taken from a patient and stained by Romanovsky's method a doctor revealed some protozoa and diagnosed the patient with Chagas disease.

What protozoan is the causative agent of this disease?

Trypanosoma cruzi

Toxoplasma gondii

Leishmania donovani

Leishmania tropica

Trypanosoma brucei

Two weeks after haemotransfusion a patient has developed fever. What protozoal disease can be suspected?

Malaria

Amebiasis

Toxoplasmosis

Trypanosomiasis

Leishmaniasis

Examination of duodenal contents revealed some pyriform protozoa with twin nuclei and four pairs of flagella. There were two supporting filaments between the nuclei and a suckorial disc on the ventral side. What representative of protozoa was revealed in this patient?

Lambliia

Leishmania

Toxoplasma

Intestinal trichomonad

Trypanosome

A patient complains of frequent bowel movements and stool with blood admixtures ("raspberry jelly" stool). Microscopic examination revealed large mononuclear cells with absorbed red blood cells. What protozoon is this morphological structure typical for

Entamoeba histolytica

Toxoplasma gondii

Balantidium coli

Giardia lamblia

Campylobacter jejuni

Microscopy of dental plaque revealed unicellular organisms. Their cytoplasm had two distinct layers, barely visible core, wide pseudopodia. The patient is most likely to have:

Entamoeba gingivalis

Lambliia

Entamoeba coli

Trichomonas tenax

Entamoeba histolytica

On the base of the clinical data a child was diagnosed with atypical pneumonia resistant to the effects of beta-lactam antibiotics. The patient's sputum was cultured and incubated in a special medium, which resulted in growth of microorganisms forming microscopic colonies with a dense center (looking like fried eggs). What microorganism caused the disease?

Mycoplasma pneumoniae

Chlamidia pneumoniae

Legionella pneumophila

Klebsiella pneumoniae

Streptococcus pneumoniae

A 40-year-old patient presents with abdominal pain, frequent loose stools with mucus and blood. Stool analysis revealed vegetative forms of some protozoa sized 30-40 microns, with short pseudopodia, containing large amounts of phagocytosed erythrocytes. What protozoan disease does the patient have?

Amebiasis

Leishmaniasis

Giardiasis

Trichomoniasis

Toxoplasmosis

Carious cavities of a 29-year-old patient contain the parasitic protozoa. It is established that they relate to the Sarcodina class. Specify these single-celled organisms:

Entamoeba gingivalis

Entamoeba coli

Amoeba proteus

Lambliia intestinalis

Entamoeba histolytica

Carious cavities of a 29-year-old patient contain parasitic protozoa. It is determined that they relate to the Sarcodina class. Specify these single-celled organisms:

Entamoeba gingivalis

Lamblia intestinalis

Entamoeba coli

Entamoeba histolytica

Amoeba proteus

Mother with 12-year-old child came to the gastroenterologist. She complains of loss of appetite and meteorism in her child. Endoscopically the child was diagnosed with biliary dyskinesia, in the duodenal contents there were pear-shaped protozoa with two nuclei and multiple flagella. What disease is the most likely in this child?

Lambliasis

Balantidiasis

Amebiasis

Trichomoniasis

Toxoplasmosis

According to the data collected by WHO researchers, every year approximately 250 million malaria cases occur in the world. This disease can be encountered predominantly in tropical and subtropical areas. The spread of this disease matches the natural habitat of the following genus of mosquitoes:

Anopheles

Culiseta

Aedes

Culex

Mansonia

Nutrient media for cultivation of microorganisms. Sterilization. Growth and reproduction of microorganisms. Isolation of bacterial pure cultures (1 session).

A patient being treated in the burns department has suppurative complication. The pus is of bluish-green colour that is indicative of infection caused by *Pseudomonas aeruginosa*.

What factor is typical for this causative agent?

Gram-negative stain

Mycelium formation

Presence of spores

Cell pairing

Coccal form

What method should be applied for sterilization of heatproof and moistureproof stomatological instruments in order to ensure total destruction of viruses, vegetative and spore forms of microorganisms?

Autoclaving

Burning in the flame of gas burner

Boiling

Tyndallization

Pasteurization

Microscopy of a smear taken from the film that appeared on the peptone water 6 hours after seeding and culturing of a fecal sample in a thermostat revealed mobile gram-negative bacteria curved in form of a comma that didn't make spores or capsules. What microorganisms were revealed?

Vibrios

Spirochetes

Corynebacteria

Clostridia

Spirilla

After inoculation of feces sample into the 1% alkaline peptonic water and 8-hour incubation in the thermostat at a temperature of 37°C a culture in form of a tender bluish

film has grown. Such cultural properties are typical for the causative agent of the following disease:

Cholera

Typhoid fever

Dysentery

Plague

Paratyphoid fever A

Growth and reproduction of microorganisms. Isolation of pure cultures of aerobic bacteria and their identification (2 session)

A bacteriological laboratory conducts the analysis of potable water quality. Microbial number of the water sample is approximately 100. What microorganisms were accounted for this case?

All bacteria that have grown on a nutrient medium

Opportunistic pathogenic bacteria

Human and animal pathogenic bacteria

Colibacilli

Enteropathogenic bacteria

A puncture sample has been taken from the inguinal lymph nodes of a patient provisionally diagnosed with plague. The sample was inoculated into hard nutrient medium. What shape will the colonies have, if the diagnosis is confirmed?

”Lace handkerchief”

”Mercury drops”

”Dewdrops”

”Shagreen leather”

”Lion’s mane”

During bacteriological examination of the purulent discharge obtained from a postoperative wound an inoculation on meat infusion agar has been performed. The

inoculation has resulted in large colorless mucous colonies that in 24 hours with exposure to sunlight developed green-blue pigmentation and smell of honey or jasmine.

Bacterioscopy revealed gram-negative lophotrichea. What bacterial culture is contained in purulent discharge?

Pseudomonas aeruginosa

Brucella abortus

Proteus vulgaris

Klebsiella ozaenae

Streptomyces griseus

A patient has wound abscess. Bacteriological examination of the wound content revealed a gram-negative bacillus which forms semi-transparent mucous colonies of blue-green colour with a pearlescent appearance on the beef-extract agar. Culture has a specific odour of violets or jasmine. What type of pathogen was isolated from the patient's wound?

P. aeruginosa

S. faecalis

S. aureus

P. vulgaris

S. pyogenes

A sample taken from the pharynx of a patient with angina was inoculated on the blood-tellurite agar. This resulted in growth of grey, radially striated (in form of rosettes) colonies up to 4-5 mm in diameter. Microscopically there can be seen gram-positive rods with club-shaped ends arranged in form of spread fingers. What microorganisms are these?

Corynebacteria diphtheria

Diphtheroids

Clostridium botulinum

Streptobacilli

Streptococci

6 hours after the initial inoculation of water sample into 1% peptone water, the growth of a culture in form of a thin pellicle on the medium surface was registered. Such cultural properties are typical for the causative agent of the following disease:

Cholera

Plague

Dysentery

Pseudotuberculosis

Tuberculosis

A patient in the oral surgery department has got purulent complication. Bacteriological analysis of the wound material found a culture that produces cyan pigment. What microorganism is the most probable causative agent?

Pseudomonas aeruginosa

Proteus vulgaris

Bacillus subtilis

Klebsiella pneumoniae

Staphylococcus epidermidis

A 3 m.o. baby has white film on the mucous membrane of his mouth, tongue and lips. A doctor suspected candidosis. What nutrient medium should be applied for inoculation of the material under examination in order to confirm this diagnosis?

Sabouraud's

Jensen's

Endo

Roux

Clauberg's

Isolation of pure cultures of anaerobic bacteria and their identification (3 session).

A lot of pyoinflammatory processes in oral cavity are caused by anaerobes. What nutrient medium can be used for control of wound textile contamination by anaerobes?

Kitt-Tarozzi

Endo

Roux

Sabouraud's

Ploskirev's

Pathological material taken from a patient suffering from pulpitis was inoculated onto Kitt-Tarozzi cultural medium. It is planned to find the following microorganisms:

Anaerobic

Aerobic

Haemolytic

Acid-resistant

Acidophilic

In 8 days after a surgery the patient developed tetanus. The surgeon suspects this condition to be caused by suture material contaminated by tetanus agent. The material is delivered to a bacteriological laboratory. What nutrient medium is required for primary inoculation of the suture material?

Kitt-Tarozzi medium

Endo agar

Sabouraud agar

Egg-yolk salt agar

Hiss medium

Microbial antagonism. Antibiotics.

After long-term antibiotic treatment a patient has developed whitish spots on the oral mucosa. Gram-positive oval budding cells were detected in the smear preparations. What causative agents were detected?

Candida fungi

Staphylococci

Tetracocci

Sarcinae

Actinomycete

In the surgical department of a dental clinic cases of hospital-acquired staphylococcal infection were registered which was caused by strains with multiple drug resistance. Such feature can be identified by presence of:

R-plasmids

F-plasmids

Virulent bacteriophages

Temperate bacteriophages

Exotoxins

Infectious process, its types, conditions of origin and development.

The patient's saliva has been tested for antimicrobial activity. What saliva component has antibacterial properties?

Lysozyme

Parotin

Cholesterol

Ceruloplasmin

Amylase

Examples of human-specific parasites are malaria plasmodium, enterobius vermicularis and some other. The source of invasion of such parasites is always a human. Such human-specific parasites cause diseases that are called:

Anthroponotic

Anthropozoonotic

Infectious

Multifactorial

Zoonotic

A 7 year old child has angina. A smear from the tonsil surface was inoculated on blood agar. 24 hours later there had grown colonies of streptococci. Nutrient medium turned transparent around them. This study revealed presence of the following pathogenous factor:

Hemolysin

Neuraminidase

Leukocidin

Endotoxin

Beta-lactamase

After consumption some tinned meat a patient had diplopia, acute headache, deglutition disorder, hard breathing, muscle weakness. The diagnosis was botulism. What factor of pathogenicity are the clinic presentations of this disease connected with?

Exotoxin

Hemolysin

Endotoxin

Plasmocoagulase

Fibrinolysin

Morphology and structure of viruses. Methods of viral cultivating. Definition of viral reproduction. Computer test control on topics 1-8.

The contents of vesicles from the mucous tunic of a man who has smallpox variola was sent to the virusologic laboratory. What will be revealed during microscopy of smears?

Guarnieri's corpuscles

Paschen's corpuscles

Babesh-Negri corpuscles

Babesh-Ernst corpuscles

Syncytium

A patient has vesicles on the mucous membrane of the oral cavity, lips and nose. A dentist suspected vesicular stomatitis. What analysis will allow to confirm the diagnosis?

Microscopy of the vesicular fluid

Recovery of virus from the vesicular fluid

Allergy test

Contamination of animals with the vesicular fluid

Recovery of bacteria from the vesicular fluid

Immunity. Non-specific factors of macroorganisms' protecting from microorganisms. Non-specific factors of protection in the oral cavity.

A 3-year-old girl has rubella. Her 10-year-old sister was not infected, despite both girls constantly remaining in contact. The pediatrician determined that the elder girl had rubella 5 years ago. What type of immunity does the elder sister have?

Natural active

Natural passive

Innate

Artificial active

Artificial passive

A patient diagnosed with botulism has been prescribed antitoxin serum for treatment.

What immunity will be formed in the given patient?

Antitoxic passive immunity

Antitoxic active immunity

Antimicrobial active immunity

Antimicrobial passive immunity

Infection immunity

In order to administer general health-improving therapy a parodontist intends to study factors of nonspecific resistance of saliva and mucous secretion. Which of the following factors of nonspecific resistance should be studied in the first line?

Lysozyme

Secretory IgA

Interferon

Complement

Properdin

Examination of patients with periodontitis revealed the interdependence between the rate of affection of periodontal tissues and the amount of lysozymes in saliva and gingival liquid. These results can be obtained during studying the following protection system of an organism:

Non-specific resistance

Cellular immunity

Humoral immunity

Autoresponsiveness

Tolerance

Blood serum of a newborn contains antibodies to measles virus. What kind of immunity is this indicative of?

Natural passive

Heredoimmunity

Artificial active

Natural active

Artificial passive

The patient's saliva has been tested for antibacterial activity. What saliva component has antibacterial properties?

Lysozyme

Amylase

Ceruloplasmin

Parotin

Cholesterol

Antigens and antibodies. Serological reactions.

A 10-year-old boy is brought to the physician by his parents because of fever, cough, and fatigue. He has been admitted to the hospital five times because of pneumonia. Attempts to induce immunity using the pneumococcal vaccine have failed. The first hospitalization was at the age of 12 months. Laboratory findings show marked reduction in all classes and subclasses of serum immunoglobulins. Which of the following immune cells is most likely to be reduced in the peripheral blood of this patient?

B-cells

Macrophages

Neutrophils

T-cells

NK-cells

During identification of pure culture of microorganisms, the most important part is a serological identification that conducted by means of agglutination reaction. What components are necessary to conduct this reaction?

Unknown bacterial culture, specific antibodies

Thermoextract, specific serum

Specific antigen, known antibody, bacteria

Unknown antibodies, nonspecific antigen

Specific antigen, serum sample obtained from the patient

A 32-year-old patient undergoing dental examination was found to have some rash-like lesions resembling secondary syphilis in the oral cavity. The patient was referred for the serological study with the purpose of diagnosis confirmation. In order to detect antibodies

in the serum, living *Treponema* were used as diagnosticum. What serological test was performed?

Immobilization

Complement binding

Neutralization

Passive hemagglutination

Precipitation

A physician is planning to diagnose an infectious disease by means of agglutination test.

What is required for this reaction apart from the serum of a patient?

Diagnosticum

Anatoxin

Hemolytic serum

Complement

Diagnostic serum

Serological diagnostics of infectious diseases is based upon specific interaction with antigens. Specify the serological reaction that underlies adhesion of microorganisms when they are affected by specific antibodies in presence of an electrolyte:

Agglutination reaction

Neutralization reaction

Hemadsorption reaction

Precipitation reaction

Complement-binding reaction

In order to establish the level of antidiphtheritic immunity in a child it was decided to use a passive hemagglutination test. This task can be completed by the sensibilization of erythrocytes by:

Diphtheria anatoxin

Diphtheria bacillus antigens

Haemolytic serum

Antidiphtheric serum

Diphtheria antitoxin

Blood analysis of a 16-year-old girl suffering from the autoimmune inflammation of thyroid gland revealed multiple plasmatic cells. Such increase in plasmocyte number is caused by proliferation and differentiation of the following blood cells:

B-lymphocytes

T-helpers

Tissue basophils

T-killers

T-supressors

Recovery of an organism from an infectious disease is accompanied by neutralization of antigens by specific antibodies. What cells produce them?

Plasmocytes

Tissue basophils

Fibroblasts

T-lymphocytes

Eosinophils

A doctor examined a patient, studied the patient's blood analyses and concluded that the peripheral organs of immunogenesis are damaged. What organs are the most likely to be affected?

Tonsils

Thymus

Kidneys

Red bone marrow

Yellow bone marrow

A patient has pure culture of diphtheria corynebacteria. What immunological reaction should be used in order to determine bacteria toxigenity?

Precipitation in agar

Agglutination

Complement binding

Inhibition of hemagglutination

Indirect hemagglutination

On the territory of a certain region the mass death of rodents was observed. It was assumed that it may be caused by plague agent. What serological reaction should be applied for quick determination of antigens of this epizootic agent?

Precipitation reaction

Agglutination reaction

Reaction of passive hemagglutination

Bordet-Gengou test

Neutralization reaction

Various cells of the oral mucous membrane and antimicrobial substances synthesized by these cells play an important part in the local immunity of the oral cavity. Specify the key factors for the local immunity:

Secretory IgA

B-lymphocytes

IgG

Macrophages

Eosinophils

A patient has a skin defect as a result of an extensive burn. In order to mask this defect the surgeons transplanted a skin flap from other body part of this patient. What type of transplantation is it?

Autotransplantation

Homotransplantation

Xenotransplantation

Allotransplantation

Explantation

Throughout a year a 37-year-old woman periodically got infectious diseases of bacterial origin, their course was extremely lingering, remissions were short. Examination revealed low level of major classes of immunoglobulins. The direct cause of this phenomenon may be the following cell dysfunction:

Plasmocytes

Macrophages

Phagocytes

Neutrophils

Lymphocytes

A patient with clinical presentations of primary immunodeficiency displays disturbance of antigen-presenting function by immunocompetent cells. What cells may have structure defect?

Macrophages, monocytes

T-lymphocytes

B-lymphocytes

Fibroblasts

0-lymphocytes

During anaesthetization of the oral cavity mucous tunic a patient developed anaphylactic shock (generalized vasodilatation, increase in vascular permeability along with escape of liquid to the tissues). What type of hypersensitivity has the patient developed?

I type (anaphylactic)

II type (antibody-dependent)

III type (immune complex)

IV type (cellular cytotoxicity)

V type (granulomatosis)

A teenager had his tooth extracted under novocain anaesthesia. 10 minutes later he presented with skin pallor, dyspnea, hypotension. When this reaction is developed and the allergen achieves tissue basophils, it reacts with:

IgE

T-lymphocytes

IgA

IgD

IgM

Serological reactions with labeled antibodies.

In order to accurately identify etiology of peptic ulcer disease, polymerase chain reaction (PCR) analysis was performed on gastric biopsy specimen taken from 47-year-old patient. Eventually the test result was positive for H. pylori. Which of the following was most likely detected in PCR analysis?

Bacterial DNA

Bacterial toxin

H. pylori bacterium itself

Bacterial enzymes – urease and catalase

Bacterial antigen

During many infectious diseases patient's blood may contain antigens of pathogens.

What reaction should be applied provided that antigenemia is at a low level?

Enzyme-linked immunosorbent assay

Agglutination reaction

Reaction of indirect hemagglutination

Reaction of latex-agglutination

Immunelectrophoresis

In case of many infectious diseases patient's blood may contain antigens of causative agents. What reaction should be applied provided that the level of antigenemia is low?

Enzyme-linked immunosorbent assay

Immuno-electrophoresis

Agglutination test

Latex agglutination test

Indirect hemagglutination test

In order to establish the level of antidiaphtheritic immunity in a child it was decided to use a passive hemagglutination test. This task can be completed by the sensibilization of erythrocytes by:

Diphtheria anatoxin

Diphtheria bacillus antigens

Haemolytic serum

Antidiaphtheric serum

Diphtheria antitoxin

Antigens of Sonne shigella placed on the objects of outdoor environment and foodstuffs can be revealed by means of a certain test with application of a diagnostic test system that includes a polystyrene tray with adsorbed specific antibodies. What reaction is it?

Immune-enzyme assay

Direct hemagglutination test

Passive inverse hemagglutination test

D. Immunofluorescence test

Immuno-electrophoresis test

A patient has been hospitalised with provisional diagnosis of hepatitis B. To make a diagnosis, serological reaction is used, which is based on antigen reacting with antibody chemically bound with peroxidase or alkaline phosphatase. What is the name of this serological reaction?

Enzymoimmunoassay

Radioimmunoassay

Immunofluorescence test

Complement binding assay

Immobilization test

Vaccines and immune serums.

A person bitten by a stray dog came to the surgeon's office. Wide lacerated wounds are localized on the patient's face. What rabies-prevention aid should be provided to this person?

Begin immunization with antirabic vaccine

Immediately administer DPT vaccine

Prescribe combined vitamin therapy

Hospitalize the patient and continue to monitor his conditions

Immediately administer normal gamma globulin

Diphtheria exotoxin had been treated with 0,3-0,4% formalin and kept in a thermostat for 30 days at a temperature of 40°C. What preparation was obtained as a result of these manipulations?

Anatoxin

Antitoxin

Diagnosticum

Therapeutic serum

Diagnostic serum

In order to eliminate occupational risks dental workers underwent vaccination. The vaccine should protect them from a viral infection, whose pathogen may be found in blood of dental patients who had had this infection or who are its chronic carriers. What vaccine was used?

Genetically engineered HBs antigen

Anti-rabies vaccine

Inactivated hepatitis A vaccine

Subunit influenza vaccine

Live measles vaccine

Specific prophylaxis involved application of a vaccine containing microorganisms and exotoxin detoxicated by formalin. It relates to the following type of vaccine:

Anatoxin

Combined

Chemical

Live

Genetically engineered

Vaccination is done by means of a toxin that has been neutralized by a formaldehyde (0,4%) at a temperature 37-400C for four weeks. Ramond was the first to apply this preparation for diphtheria prophylaxis. What preparation is it?

Anatoxin

Adjuvant

Antitoxic serum

Immunoglobulin

Inactivated vaccine

In the area being the epicenter of the registered rabies cases among wild animals a 43-year-old man presented to a clinic and claimed to have been bitten by a stray dog. He was given a course of anti-rabies vaccine. This preparation relates to the following type of vaccines:

Inactivated

Attenuated

Synthetic

Molecular

Toxoids

In the epicenter of the registered rabies cases among wild animals a 43-year-old man came to a clinic and claimed to have been bitten by a stray dog. He was given a course of anti-rabies vaccine. This preparation belongs to the following type of vaccines:

Inactivated

Attenuated

Molecular

Toxoids

Synthetic

A patient diagnosed with botulism has been prescribed antitoxin serum for treatment.

What immunity will be formed in the given patient?

Antitoxic passive immunity

Antitoxic active immunity

Antimicrobial active immunity

Antimicrobial passive immunity

Infection immunity

Computer test control by 1-13 topics.

Final module control 1.