Module 2.

Special microbiology.

Staphylococci and streptococci. Microbiological diagnosis of diseases caused by staphylococci and streptococci.

Routine investigation of microbiological sanitary condition of air in a hospital is performed once in 3 months. What microorganism is the sanitary indicator of air condition in an enclosed space?

S.aureus

P.aeruginosa

C.perfringens

E.coli

E.faecalis

During inspection of dental tools for sterility in one case gram-positive cocci were detected. They were situated in clusters and yielded positive plasma coagulation reaction; the cocci were fermenting mannitol in anaerobic conditions and exhibiting lecithinase activity. What microorganism was detected?

Staph. aureus

St. epidermidis

St. saprophiticus

Str. pyogenes

Corinebacterium xerosis

From the purulent exudate of a patient with odontogenic phlegmon a pure culture of Gram(+) microorganisms was segregated. This culture was lecithinously active, coagulated plasma of a rabbit, decomposed mannitol under anaerobe conditions. What microorganism may have contributed to the origin of suppurative complication?

S.aureus

S.epidermidis

S.pyogenes
S.viridans
S.mutans

Analysis of sputum taken from a patient with suspected pneumonia revealed rather elongated gram-positive diplococci with somewhat pointed opposite ends. What microorganisms were revealed in the sputum?
Streptococcus pneumoniae
Neisseria meningitidis
Neisseria gonorrhoeae
Staphylococcus aureus
Klebsiella pneumoniae

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
Tetracocci
Streptococci
Candida fungi

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

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Staph. aureus

St. epidermidis

St. saprophiticus

Str. pyogenes

Corinebacterium xerosis

Purulent discharges of a patient with a mandibulofacial phlegmon contain spheroid microorganisms making S-shaped colonies with golden pigment that produce lecithinase, plasmocoagulase, hemolysin and decompose mannitol under anaerobic conditions. Specify the kind of microorganisms that had caused the suppuration:

S. aureus

S. epidermidis

Str. pyogenes

Str. mutans

Str. sanguis

Meningococci and gonococci. Microbiological diagnosis of diseases caused by meningococci and gonococci.

A newborn child has hyperemia, edema of mouth mucous membrane, small erosions with viscous mucopurulent discharge. Examination of mucopus smears reveals a great number of leukocytes containing gram-negative diplococci. The same microorganisms can be found outside the leukocytes. What is the most probable diagnosis?

Gonococcal stomatitis

Toxoplasmosis

Prenatal syphilis
Blennorrhea
Staphylococcal stomatitis

Bacterioscopy of nasopharyngeal mucus taken from a 2,5-year-old child with nasopharyngitis revealed gram-positive diplococci looking like coffee grains. What organs of the child are most likely to be affected if these microorganisms penetrate the blood?
Brain tunics
Cardiac valves
Renal glomeruli
Urogenital tracts
Lymph nodes

A 5 y.o. child had a temperature rise up to 400C, acute headache, vomiting, anxiety, chill. 4 days later there appeared hemorrhagic skin eruption, oliguria and adrenal insufficiency that caused death. Bacteriological examination of smears from the child's pharynx revealed meningococcus. What disease form was revealed?
Meningococcemia
Meningococcal meningitis
Meningicoccal nasopharyngitis
Meningoencephalitis
-

A female woman has been clinically diagnosed with gonorrhea. Which of the following studies can be used to confirm the diagnosis?
Microscopy of the pathological material
Hemagglutination reaction
Immobilization reaction
Disinfection of laboratory animals
Bacteriophage test

Bacteriological examination of purulent discharges from urethra revealed some bacteries that had negative Gram's stain, resembled of coffee corns, decomposed glucose and maltose up to acid. They were located in leukocutes. What disease do they cause?
Gonorrhea
Syphilis
Venereal lymphogranulomatosis
Soft chancre
Pseudocholera

While studying blood and mucus samples from the nasopharynx, a bacteriologist took certain measures to conserve the pathogens in the material. Bacterioscopic study revealed the presence of gram-negative cocci looking like coffee beans and arranged in pairs or tetrads. Name the pathogen that was isolated by the bacteriologist:
Neisseria meningitides
Neisseria gonorrhoeae
Acinetobacter calcoaceticus
Moraxella lacunata
Staphilococcus aureus

Microscopical study of discharges from urethra of a patient suffering from acute urethritis revealed bean-shaped microorganisms up to 1 micrometer in diameter arranged in pairs and placed inside the leukocytes. What microorganisms are these?
Gonococci
Staphylococci
Tetracocci
Meningococci
Streptococci

Esherichia and Salmonella. Microbiological diagnosis of colienteritis, typhoid fever, paratyphoid fever A and B, gastrointestinal salmonellosis.

It was reported an outbreak of food poisoning connected with consumption of pastry that had been stored at a room temperature and had duck eggs as one of the ingredients. What microorganisms might have caused this disease?

Salmonella

Staphylococci

Colon bacilli

Legionella

Comma bacilli

After the sanitary and bacteriological study of tap water the following results were obtained: the total number of bacteria in 1,0 ml was 80, coli index was 3. How would you interpret the study results?

Water is safe to be consumed

Water is of doubtful quality

Water is contaminated

Water is highly conaminated

Water is of highly doubtful quality

Shigella and Vibrio. Microbiological diagnostics of shigellosis and cholera.

A man complaining of nausea, liquid stool with mucus and blood streaks, high temperature, and weakness was hospitalized into the infectious deseases department. The doctor suspects dysentery. What method of laboratory diagnostics would be the most effective for conformation of this diagnosis?

Bacteriological analysis

Protozoal analysis

Microscopy

Mycological analysis

Serological analysis

Retrospective diagnostics of old bacillary dysentery required serologic examination of blood serum in order to determine blood titer to the shigells. What reaction should be applied for this purpose?
Reaction of passive hemagglutination
Bordet-Gengou test
Precipitation reaction
Hemolysis reaction
Bacteriolysis reaction

After inoculation of feces sample into the 1% alkaline peptonic water and 8-hour incubation in the thermostat at a temperature of 37oC 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

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

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

From the fecal sample of a patient Shigella sonnei were isolated. What additional studies are required to identify the source of infection?
Phage-typing of the isolated pure culture
Neutralization reaction
Precipitation reaction
Antibiogram
Complement-fixation reaction

Laboratory of extremely dangerous infections received a sample taken from a patient with assumed cholera. What express-diagnostics method can confirm this diagnosis?
Immunofluorescence test
Complement binding reaction
Agglutination test
Precipitation reaction
Hemagglutination reaction

A patient was taken to the hospital with complaints of headache, high temperature, frequent stool, stomach pain with tenesmus. Doctor made a clinical diagnosis dysentery and sent the material (excrements) to the bacteriological laboratory for analysis. What diagnostic method should the laboratory doctor use to confirm or to disprove the clinical diagnosis?
Bacteriological
Biological

Bacterioscopic
Serological
Allergic

Causative agents of plague and anthrax. Microbiological diagnosis of plague and anthrax.

A 43-year-old cattle farm worker is brought to the sergeon with fever, malaise, and inflamated lesions on his hands and arms. He reports that about 2 weeks before his presentation at the hospital he noticed small, painless, pruritic papules that quickly enlsrged and developed into erosion and left painless necrotic ulcers with black, depressed eschar. Gram's staining of the ulcers reveals gram-positive spore-forming bacilli. Which of the following diseases is the most litely cause of these findings?
Antrax
Plague
Chickenpox
Tularemia
Syphilis

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"

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 antigene of this epizootic agent?
Precipitation reaction
Agglutination reaction
Reaction of passive hemagglutination
Bordet-Gengou test
Neutralization reaction

A patient complained about a carbuncle on his face. Examination results: neither dense nor painful edema of subcutaneous cellular tissue, there is black crust in the middle of the carbuncle and peripheral vesicular rash around it. Bacteriological examination revealed presence of immobile streptobacilli able of capsulation. What microorganisms are causative agents of this disease?
Bacillus antracis
Bacillus subtilis
Bacillus megaterium
Staptylococcus aureus
Bacillus anthracoides

A 34 year old male patient cosulted a doctor about face carbuncle. Objectively: a loose, painless edema of hypodermic tissue; black crust in the centre of carbuncle, vesicular rash around it. Microbiological examination revealed static streptobacilli capable of capsule building. What microorganisms are the causative agents of this disease?
Bacillus antracis
Bacillus subtilis
Bacillus megaterium
Bacillus anthracoides
Staptylococcus aureus

A worker of a cattle farm consulted a surgeon about fever up to 40oC, headache, weakness. Objective examination of his back revealed hyperemia and a dark red infiltration up to 5 cm in diameter with black bottom in its center, which was surrounded with pustules. What disease are these presentations typical of?

Anthrax

Plague

Tularemia

Furuncle

Abscess

An infectious diseases hospital admitted a veterinarian with assumed brucellosis. What serologic test can confirm this diagnosis?

Wright's agglutination reaction

Widal's agglutination reaction

Ascoli's precipitation reaction

Weigl's agglutination reaction

Wassermann reaction of complement binding

Dwellers of a village noticed mass mortality of rats in some farms. It was suspected that the animals might have died from plague. What postmortal analyses should be conduced in order to establish the causative agent of the infection as soon as possible?

Ring precipitation reaction

Agglutination reaction

Passive agglutination reaction

Neutralization reaction

Complement-binding reaction

There was a record of some anthrax cases among animals in a countryside. The spread of disease can be prevented by means of immunization. What kind of vaccine should be used?

STI live vaccine

Diphteria and tetanus toxoids and pertussis vaccine

Sabin's vaccine

BCG vaccine

Salk vaccine

Corynebacteria. Microbiological diagnosis of diphtheria.

A child was hospitalized with diagnosis of diphtheria. What should be given to this child for specific therapy?

Diphtheria antitoxin serum, antibiotics

Codivac vaccine, sulfanilamides

Diphtheria vaccines: DPT, DT, diphtheria vaccine

Diphtheria anatoxin, antibiotics

Diphtheria bacteriophage

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

Anatoxin

Antitoxin

Diagnosticum

Therapeutic serum

Diagnostic serum

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

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

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

Neisser

Kozlovsky

Ziehl-Neelsen

Zdrodovsky

Aujeszky

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

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

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 7 year old girl was taken to an infectious diseases hospital. She had complaints of high temperature, sore throat, general weakness. A doctor assumed dyphteria. What will be crucial proof of diagnosis after defining pure culture of pathogenic organism?
Toxigenity test
Detection of volutine granules
Cystinase test
Hemolytic ability of pathogenic orhanism
Phagolysability

When examining a child the dentist found the deposit on both tonsils and suspected atypical form of diphtheria. A smear was taken, and after the nutrient media inoculation

the toxicity of the isolated pure culture was determined. What reaction was used to determine the toxigenicity of the isolated strain of diphtheria bacillus?

Gel precipitation reaction

Complement binding reaction

Hemolysis reaction

Ring precipitation reaction

Agglutination reaction on a glass slide

Mycobacteria Microbiological diagnosis of tuberculosis.

A sick child is suspected to have tuberculosis and is referred for Mantoux test. 24 hours later the place of allergen injection became swollen, hyperemic, and tender. What main components determine the development of this reaction?

Mononuclear cells, T-lymphocytes, and lymphokines

B-lymphocytes and IgM

Plasma cells, T-lymphocytes, and lymphokines

Macrophages, B-lymphocytes, and monocytes

In a maternity hospital a newborn should receive vaccination against tuberculosis. What vaccine should be chosen?

BCG vaccine

EV vaccine

STI vaccine

DPT vaccine

Tuberculin

The first grade pupils went through a medical examination aimed at selection of children needing tuberculosis revaccination. What test was applied?

Mantoux test

Supracutaneous tularin test

Burne test

Anthracene test
Schick test

Microscopic analysis of tissue sampling from affected area of mucous membrane of oral cavity revealed bacillus in form of accumulations that looked like a pack of cigarettes. Ziehl-Neelsen staining gives them red colour. What kind of pathogenic organism was most likely revealed in tissue sampling?
M.leprae
M.tuberculosis
A.bovis
A.israilii
M.avium

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

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

Causative agents of anaerobic infections. Microbiological diagnosis of anaerobic infections (tetanus, botulism, gas gangrene).

A 37-year-old male was admitted to a hospital complaining of abdominal pain, difficulty in swallowing and breathing, constipation and nausea. He developed respiratory failure and required endotracheal intubation and ventilation. Two days before, the patient consumed dried solted fish bought from an artisanal produser. Laboratory investigation for infectious pathogen was performed using Kitt-Tarozzi's method. Observation under a bright field mixroscopy revialed the presence of typical microorganisms with "tennis racket" appearance. Which of the following is the most likely diagnosis?

Botulism

Nontyphoidal Salmonella infection

Shigella infection

Typhoid fever

Cholera

Typical signs of food poisoning caused by C. botulinum include diplopia, swallowing and respiration disorders. These signs develop due to:

Exotoxin action

Enterotoxin action

Enterotoxic shock development

Adenylate cyclase activation

Adhesion of the agent to enterocyte receptors

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

A patient with convulsive contractions of facial muscles was admitted to the infectious disease ward. From a scratch on his lower right extremity analysts isolated bacteria with terminal endospores that gave them drumstick appearance. What bacteria are compliant with given description?
Clostridium tetani
Clostridium botulinum
Clostridium perfringens
Bacillus anthracis
Bacillus cereus

A bacteriological laboratory studied the home-made dried fish which had caused a severe food poisoning. Microscopy of the culture grown on the Kitt-Tarozzi medium revealed microorganisms resembling a tennis racket. What is the most likely diagnosis?
Botulism
Salmonellosis
Typhoid fever
Dysentery
Cholera

On microscopic examination of leftovers of the canned meat eaten by a patient with severe food toxicoinfection the following was detected: gram-positive bacilli with subterminal staining defect and configuration alteration of bacilli generally resembling a tennis racket. What agent was detected?
C. botulinum
S. aureus
E. coli
S. enteritidis

P. vulgaris

A lot of pyoinflammatory processes in oral cavity are caused by anaerobes. What nutrient medium can be used for conrol of wound textile contamination by anaerobes?
Kitt-Tarozzi
Endo
Roux
Sabouraud's
Ploskirev's

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

A 47-year-old male patient consulted a dentist about difficult mouth opening (lockjaw). The patient has a history of a stab wound of the lower extremity. What infection can be manifested by these symptoms?
Tetanus
Brucellosis
Whooping cough
Anaerobic wound infection
Tularemia

What preventive medications should be injected to a patient with open maxillofacial trauma provided that he has never got prophylactic vaccination before?
Antitetanus immunoglobulin and anatoxin

Antitetanus serum and antibiotics

Diphtheria, tetanus toxoids and pertussis vaccine and antibiotics

Tetanus anatoxin and antibiotics

Anticonvulsive drugs and anatoxin

Spirochetes Microbiological diagnosis of syphilis, relapsing fever and leptospirosis.

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 patient had been provisionally diagnosed with syphilis. A laboratory assistant took the blood serum for an immunologic test based on the detection of antibodies preventing the movement of treponemes and causing their death. What reaction was used for the diagnosis?

Immobilization

Complement binding

Precipitation

Agglutination

Neutralization

Orthomyxoviruses and paramyxoviruses. Laboratory diagnosis of influenza.

Such presentations as catarrhal conjunctivitis, pharyngitis, laryngotracheobronchitis, white spots on the buccal mucosa in the region of lower premolar teeth, maculopapular rash on face, body and extremities are typical for the following disease:

Measles

Scarlet fever

Spotted fever

Meningococcal infection

Influenza

To prevent the seasonal influenza epidemics in the city hospitals, sanitary epidemic station gave orders to immunize health care workers. Which of the following preparations should be used for immunization?

Subunit vaccine

Rimantadine

Interferon

Amantadine

Gamma-globulin

Picornaviruses. Laboratory diagnosis of enterovirus infections.

A paitent, who works as a milkmaid, has made an appoinment with a dentist with complaints of aphtha-shaped rash on the mucosa of oral cavity. The doctor detected rash on her hands in the area of nail plates. What agent causes this disease?

Foot-and-mouth disease virus

Cytomegalovirus

Vesicular stomatitis virus

Herpesvirus

Coxsackie B virus

Retroviruses. HIV. Laboratory diagnosis of HIV infection.

A doctor examined a patient with recurrent aphthous stomatitis with concominant candidosis and decided to eliminate a possibility of HIV-infection. What examination can help to clear the situation up and make a provisional di-agnosis?

Immune-enzyme analysis

Gel precipitation reaction

Reaction of hemagglutination inhibition

Reaction of hemagglutination

Phase-contrasr microscopy

The immunoblot detected gp120 protein in the blood serum. This protein is typical for the following disease:

HIV-infection

Syphilis

Poliomyelitis

Tuberculosis

Virus B hepatitis

HIV has gp41 and gp120 on its surface interacts with target cells of an organism. Which of the following human lymphocyte antigens is gp120 complementary bound with?

CD 4

CD 19

CD 28

CD 8

CD 3

A patient consulted an immunologist about diarrhea, weight loss within several months, low-grade fever, enlarged lymph nodes. The doctor suspected HIV infection. What immunocompetent cells must be studied in the first place?

Helper T-lymphocytes

B-lymphocytes

Suppressor T-lymphocytes

Plasma cells
Monocytes

Often the cause of secondary immunodeficiency is an infectious affection of an organism, when agents reproduce directly in the cells of immune system and destroy them. Specify the diseases, during which the described above occurs:
Infectious mononucleosis, AIDS
Tuberculosis, mycobacteriosis
Poliomyelitis, viral hepatitis type A
Dysentery, cholera
Q fever, typhus

Pathogens of viral hepatitis. Laboratory diagnosis of hepatitis.

During laboratory diagnostics if hepatitis C, it is necessary to detect the presence of antibodies to hepatitis C virus in the patient's blood serum. What test should be conducted in this case?
Enzyme-linked immuno sorbent assay (ELISA)
Nucleic acid hybridization
Ligase chain reaction
Nucleic acid hybridization with signal amplification
DNA probe method

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

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

Immune-enzyme assay of blood serum revealed presence of HBs-antigen. What disease is signalized by this antigen?
Viral hepatitis B
Viral hepatitis A
Tuberculosis
Syphilis
AIDS

Examination of a 27-year-old donor who had not donated blood for a long time revealed HBs antibodies detected by ELISA method. In this case, the positive ELISA results indicate that the donor:
Had hepatitis B
Has chronic hepatitis B
Has acute hepatitis C
Has chronic hepatitis C
Has acute hepatitis B

Professional dentists belong to the risk group concerning professional infection with viral hepatitis type B. Name an effective method for active prevention of this disease among the dentists:

Vaccination with recombinant vaccine

Secure sterilization of medical instruments

Working with gum gloves on

Introduction of specific immunoglobuline

Introduction of interferonogenes

Herpesviruses and Adenoviruses. Laboratory diagnosis of herpes and adenoviral infections. Defeat of the oral cavity in occurrence of herpetic infection.

A patient consulted a dentist about pains, reddening and swelling of gums. The dentist assumed herpetic gingivostomatitis. What virus might have caused this disease?

Herpes simplex virus type 1

Herpes simplex virus type 2

Herpes zoster

Cytomegalic virus

Epstein-Barr virus

Microflora of the oral cavity.

Microbiological and immunological aspects of etiology and pathogenesis of caries.

Microscopy of a dental plaque revealed a large number of cocci arranged in pairs and strings, as well as Gram-positive bacilli which were likely to be the cause of cariogenesis. What microorganism associations are involved in the development of dental caries?

S.mutans streptococci and lactobacilli

S.salyvarius streptococci and lactobacilli

S.mutans streptococci and corynebacteria

S.aureus and lactobacilli

S.salyvarius streptococci and enterococci

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

Microbiological and immunological aspects of etiology and pathogenesis of periodontal lesions.

During inspection of dental tools for sterility in one case gram-positive cocci were detected. They were situated in clusters and yielded positive plasma coagulation reaction; the cocci were fermenting mannitol in anaerobic conditions and exhibiting lecithinase activity. What microorganism was detected?
Staph. aureus
St. epidermidis
St. saprophiticus
Str. pyogenes
Corinebacterium xerosis

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 osaenae
Streptomyces griseus

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?
P seudomonas aeruginosa
P roteus vulgaris
Bacillus subtilis
Klebsiella pneumoniae
Staphylococcus epidermidis

A lot of pyoinflammatory processes in oral cavity are caused by anaerobes. What nutrient medium can be used for conrol of wound textile contamination by anaerobes?
Kitt-Tarozzi
Endo
Roux
Sabouraud’s
Ploskirev’s

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

Microbiological and immunological aspects of etiology and pathogenesis of oral mucous lesions.

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

The patient’s saliva has been tested for antibacterial activity. What saliva component has antibacterial properties?
Lysozyme
Amylase
Ceruloplasmin
Parotin
Cholesterol

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 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
Final computer test control.
Practical skills control.
Final module control 1. Morphology and physiology of microorganisms. Genetics. Antibiotics Infection. General virology. Immunity. Vaccines and immune serums.