

Algorithms for performing tasks on infectious diseases

1. Typhoid fever

1. The diagnosis of typhoid fever was established due to the classification ICD-10 (A01.0 Typhoid fever), taking into account clinical and epidemiological criteria, which are:

- contact with patients and/or stay in places which are endemic to typho-paratyphoid infections;
- gradual onset of the disease with fever and tendency to its constant character;
- pallor of the skin;
- tendency to relative bradycardia, hypotension.
- tendency to inhibited nervous activity, apathy;
- disturbance of the sleep formula, persistent headache;
- typical plaque on the tongue;
- tendency to constipation;
- hepatolyenal syndrome;
- the appearance of a roseola rash.

2. Specific complications of typhoid fever are intestinal bleeding, bowel perforation, ITS.

3. It is necessary to examine the blood, feces.

4. The methods of examination for suspected typho-paratyphoid disease include GBC, which is characterized by leukopenia with lymphocytosis, aneosinophilia, thrombocytopenia, anemia. Specific diagnostics are carried out by bacteriological method, first of all blood culture (hemoculture). The serological method can be used to confirm the diagnosis from 2 weeks of illness. Used RA (Vidal reaction), RNGA, ELISA.

5. Etiotropic treatment: chloramphenicol (levomitsetin) 0.5 g 5 times a day to 2 days normal temperature, then 0.5 4 times a day to 10 days normal temperature. It is also possible to use cephalosporins, fluoroquinolones.

2. Cholera

1. The diagnosis of cholera is established according to the classification ICD-10 (A00 Cholera), taking into account clinical and epidemiological criteria, which are:

- staying in the cholera endemic region;
- drinking water from open sources, contact with patients with cholera or similar clinical picture;
- the duration of the incubation period up to 5 days (on average 2-3 days);
- acute onset of the disease;
- no fever; diarrhea without pain prior to vomiting;
- frequent feces by the type of rice broth;
- rapid increase of dehydration;

2. According to the WHO guidelines, the following are the levels of dehydration:

1. Early dehydration. Either without clinical signs, or complaints of moderate weakness, thirst, dry mouth.

2. Moderate dehydration. Thirst, weakness, dizziness, irritability. Reduction of skin turgor, voice hoarseness, acrocyanosis, cold extremities. Tachycardia, moderate hypotension. Reduction of diuresis.

3. Severe dehydration. Sleepiness or confusion. Sharp reduction of skin turgor, sore eyes, symptom of "dark glasses", generalized cyanosis, cold extremities. Pulse is weak or undetectable. Blood pressure is very low or undetectable. Anury.

3. Laboratory criteria for the diagnosis of cholera are: increase in hematocrit, hypokalemia, hypochloremia, a specific method is bacteriological examination of feces or vomiting.

4. The main direction of treatment of the patient is rehydration therapy with the use of saline solutions. Oral rehydration mixtures are prescribed for those with initial and moderate dehydration without vomiting. For patients with moderate rehydration, accompanied by vomiting and severe degree of dehydration, parenteral rehydration is required. To accelerate the elimination of vibrios from the body in cholera with dehydration in the event of discontinuation of vomiting, doxycycline 0.3 g or azithromycin 1 g inside is prescribed once

3. Leptospirosis

1. The diagnosis of leptospirosis was established due to the classification ICD-10 (A27.0 Leptospirosis) taking into account clinical and epidemiological criteria, which are:

- contact with water from non-flowing and open reservoirs;
- stay in rodent locations;
- professional factor (livestock, veterinarians, farmers, hunters, fishermen, etc.);
- sudden onset of illness with chills;
- high fever;
- myalgia, especially the calf muscles;
- hemorrhagic syndrome;
- liver pathology with possible development of jaundice;
- kidney pathology with possible development of KI.

2. Research methods for confirmation of the diagnosis: detection of leptospira during microscopy in the dark field, RNGA, RZK, functional tests of the liver, urea, creatine, coagulogram.

3. Etiotropic treatment: benzylpenicillin, cephalosporins. Pathogenetic treatment: detoxification, hemostatics, forced diuresis.

4. Viral hepatitis A

1. The diagnosis of viral hepatitis A (CAA) was established according to the classification ICD-10 (B15. Acute CAA), taking into account clinical and epidemiological criteria, which are:

- the development of the disease after contact with a patient with HAV or stay in a disadvantaged region with regard to HAV;
- cyclical development of the disease with the appearance of characteristic syndromes of the pre-yellowish period (dyspeptic, pseudoglucose, asthenovegetative);
- reduction of intoxication, jaundice, hepatosplenomegaly during the height of the disease.

2. Research methods include: biochemical blood test: total bilirubin and its fractions, ALT, ACAT, thymol sample. Specific diagnosis: serum ELISA on aHAVIgM.

3. Principles of treatment: detoxification therapy, enterosorbents, vitamins.

5. Viral hepatitis B

1. The diagnosis of viral hepatitis B (HBV) was established according to the classification ICD-10 (B16. Acute HBV), taking into account clinical and epidemiological criteria:

- Positive epidemiological history (information on hemocontact or sexual transmission);
- Long period of jaundice period, frequent arthralgic guarantee its course;
- Increase in intoxication, jaundice, hepatosplenomegaly period of the disease.

2. The most serious complication of HBV is acute liver failure (acute liver encephalopathy), which is divided into stages by the degree of neuropsychiatric disorders:

Stage I is characterized by emotional lability, euphoria, changing apathy, sleep inversion, moving disorders, and impaired memory.

Stage II is characterized by disorientation in space and time, memory lapses, possible psycho-motor arousal, hemorrhagic syndrome, jaundice, decrease in liver size, tachycardia.

Stage III (Coma 1) - complete disturbance of consciousness, tremor, convulsions, pathological reflexes.

Stage IV (Coma 2) - complete loss of consciousness, areflexia, deep breathing disorders.

3. Methods for biochemical blood testing include: total bilirubin and its fractions, ALT, ACAT, thymol sample, prothrombin index.

4. Specific diagnosis: HBsAg, HBeAg, aHBcIgM, HBV DNA PCR.

5. Specific prevention of the disease - vaccination.

6. Influenza

1. The diagnosis of influenza has been established according to the classification ICD-10 (J.09 Influenza), taking into account clinical and epidemiological criteria, which are:

- Contact with flu patients, presence of epidemic in certain area;
- Acute onset of intoxication syndrome, maximum manifestations of the disease in the first hours of the disease;
- Headache with predominant localization in the frontal area and temples;

- Catarrh syndrome is characterized by tracheitis, soft palate granules and brackets
- 2. The complications of influenza are observed by the respiratory (hemorrhagic pulmonary edema, pneumonia), nervous (swelling-swelling of the brain) and cardiovascular system (myocarditis).
- 3. For rapid diagnosis of the disease use rapid tests for rapid diagnosis.
- 4. Neuraminidase inhibitors - oseltamivir (tamiflu) are used for the etiotropic treatment of the patient.
- 5. Specific prevention of the disease - vaccination.

7. Oropharyngeal diphtheria:

1. Diagnosis of pharyngeal diphtheria was established according to the classification ICD-10 (A 36.0 Diphtheria of the pharynx (diphtheria membranous angina, tonsillary diphtheria)), taking into account clinical and epidemiological criteria:

- the onset of the disease is usually acute
- there is intoxication syndrome that correlates with local changes
- there is a layer on the tonsils or other lymphoid formations in the oropharynx, which have fibrinous, filmy nature
- Sore throat is moderate, often not consistent with the nature of local changes
- the voice can acquire a tinge
- Mucous edema and cyanosis predominate over hyperemia
- maxillary and cervical lymph nodes enlarged, moderately painful

2. Instrumental research methods: ECG

Specific research methods:

- Bacterioscopic method
- Bacteriological method
- PCR

3. Treatment:

- Compulsory hospitalization in an infectious hospital
- Anti-diphtheria antitoxic serum
- Antibacterials (erythromycin, benzylpenicillin)

4. Specific prevention: planned vaccination

8. Tertian malaria

1. The diagnosis of malaria (three days) was established according to the classification ICD-10 (B 54 Malaria, unspecified, (B 51 Malaria caused by P. Vivax, B 53 Malaria caused by P. ovale)), taking into account clinical and epidemiological criteria:

- stay in malaria endemic areas (Africa, Asia Central and South America, etc.) for the last 2 years
- blood transfusions during the last 14 days
- paroxysmal fever (chills, fever, profuse sweating)
- during three days of malaria paroxysms recur after 1 day
- hepatosplenomegaly
- anemia

2. Basic research methods:

- CBC
- Investigation of a thick drop on malaria
- Investigation of thin smear on malaria

3. Treatment:

- Compulsory hospitalization in an infectious hospital
- Etiotropic therapy: antimalarial drugs (Delagil (chloroquine), primaquine)

4. Specific prevention of malaria: chemoprophylaxis of antimalarial drugs (one week before departure, during the entire period of stay in the endemic area and within one week after return)

9. Botulism

1. The diagnosis of botulism was established according to the classification ICD-10 (A 05.1 Botulism), taking into account clinical and epidemiological criteria:

- the consumption of products that may contain botulotoxin (meat, fish, vegetables, canned mushrooms, salted or salted fish, sausage)
- no fever
- disorders of the digestive tract - pain in the epigastric region, vomiting, rare bowel movements, which next day change to bowel paresis syndrome (bloating, constipation)
- Ophthalmoplegic syndrome (reduced vision, double vision, "mesh", "mist" before the eyes, pupils dilated, anisocoria, reaction to light is weak)

- Bulbar syndrome (difficulty swallowing, complaints of "lump in the throat" of fluttering, the voice acquires a tinge tinge)

2. Specific research method: biological method

3. Treatment:

- Compulsory hospitalization in an infectious hospital

- The first stage: gastric lavage (using a probe) and intestines (siphon enema) with 5% sodium hydrogen carbonate solution;

- The second stage is a polyvalent anti-botulinum serum

- The third stage - detoxification therapy, hyperbaric oxygenation

10. Shigellosis

1. The diagnosis of shigellosis was established according to the classification ICD - 10 (A 03 Shigellosis), taking into account clinical and epidemiological criteria:

- use of suspected product agent (especially meat and dairy) contamination, contact with the patient, poor living conditions

- sharp start, feverish

- compliance with the degree of intoxication of fever pitch

- abdominal pain, especially in the left iliac and iliac regions

- frequent scarring, with mucus and streaks of blood

- soreness, spasm and consolidation of the sigmoid colon

- tenesmus

2. Complications:

- ITS

- Intestinal bleeding

- Intestinal perforation and peritonitis

3. Basic research methods:

- CBC

- Coprogram

- Bacteriological examination of faeces

- Serological studies: RNGA, RA

4. Treatment:

- Etiotropic treatment: antibacterial drugs (Ciprofloxacin or other non-respiratory fluoroquinolones)
- Pathogenetic treatment: detoxification therapy, enterosorbents, hemostatic therapy

11. HIV infection

1. The diagnosis of HIV infection is established according to the classification ICD-10 (B 20 Diseases caused by HIV, which is accompanied by infectious and parasitic diseases), taking into account clinical and epidemiological criteria:

- anamnesis data (injecting drug use, sexually transmitted or parenteral diseases, "risk behavior")
- clinical manifestations of the relevant stage of the disease
- in the general blood test: moderate hypochromic anemia, thrombocytopenia, neutropenia, increased ESR.

2. Clinical stages of the disease according to WHO:

CLINICAL STAGE I

- Asymptomatic
- Persistent generalized lymphadenopathy

CLINICAL STAGE II

- Weight loss up to 10% of the initial
- Minimal lesions of skin and mucous membranes (seborrheic dermatitis, fungal nail lesions, recurrent ulceration of the oral mucosa)
- An episode of shingles in the last 5 years
- Recurrent upper respiratory tract infections

CLINICAL STAGE III

- Weight loss more than 10% of the original
- Unmotivated chronic diarrhea of more than 1 month duration.
- Unmotivated fever (intermittent or constant) lasting more than 1 month.
- Candidiasis of the oral cavity (edema and hyperemia of the mucous membrane of the oropharynx, white loose layers).
- Hairy leukoplakia of the oral mucosa
- Often recurrent shingles
- Pulmonary tuberculosis, which developed during the year preceding the examination

- Severe bacterial infections
- Generalized lymphadenopathy usually persists

CLINICAL STAGE IV

- Exhaustion syndrome (cachexia) on the background of HIV infection
- Pneumocystis pneumonia
- cerebral toxoplasmosis
- cryptosporidiosis with diarrhea more than 1 month.
- extra-lung cryptococcosis
- cytomegalovirus infection with lesions of any organs except the liver, spleen or lymph nodes
- infection caused by herpes simplex virus, with lesions of the internal organs or chronic lesions of the skin and mucous membranes
- progressive multiple leukoencephalopathy
- any endemic mycosis
- candidiasis of the esophagus, trachea, bronchi or lungs
- disseminated non-tuberculous mycobacteriosis
- Salmonella septicemia (except S.typhi)
- extra-pulmonary tuberculosis
- Kaposi's sarcoma
- HIV encephalopathy

3. Research methods:

- HIV rapid test
- ELISA
- PCR
- Immunoblotting
- The level of immunosuppression, CD4 / CD8

4. The most dangerous biological fluids of the patient: blood, breast milk and vaginal secretions - in women, semen - in men

12. Tetanus

1. The diagnosis of generalized tetanus was established according to clinical classification (generic tetanus, local tetanus, main tetanus, neonatal tetanus), taking into account clinical and epidemiological criteria:

- history of injury or trauma, burns, frostbite, surgery, childbirth, abortion in outpatient settings, as well as information on prior vaccination against tetanus
- the presence of the classic early triad of symptoms (trismus, sargeonic smile, dysphagia)
- constant tonic muscle tension (opistotonus)
- tetanic cramps
- consciousness during the trial
- feverish
- profuse sweating

2. The most likely early complications

- Bronchitis or pneumonia or pulmonary edema
- Fractures of bones and spine
- Tendon tears
- Myocardial infarction or myocarditis

3. Treatment:

- Compulsory hospitalization in an infectious hospital
- The main method of specific therapy: anti-toxic antitoxic serum

4. Drugs for specific prevention

- Anti-toxic serum
- Right toxoid
- Human unlawful immunoglobulin

13. Plague

1. The diagnosis of the plague is established according to the classification ICD-10 (A20.0 Plague, bubonic form), taking into account the clinical and epidemiological criteria:

- Sharp start
- Fever
- Severe intoxication

- Serous hemorrhagic inflammation of the lymph nodes and severe local pain at the site of tambourine

2. Examination methods

- Bacterioscopic (examine gram stained, methylene blue or treated with a specific luminescent serum smears, reveal a formidable form of gram negative sticks, bipolarly stained)

- Bacteriological (sowing of material on Marten or Hottinger agar with sodium sulfite, IPB followed by crop identification and virulence determination)

- Serological (RPGA, RGPA, RNAh, PHA, ELISA with mono- or polyclonal antibodies). For rapid diagnostics use RIF (100% specificity)

- Allergic test with pestin

- Biological method (intraperitoneal, subcutaneous, intradermal injection of guinea pig material or white mice)

- PCR

3. Plague according to international health standards is a particularly dangerous Disease. Plague patients are subject to compulsory hospitalization in specialized hospitals that work in strict anti-epidemic mode.

4. Means of etiotropic therapy

- Streptomycin 30 mg / kg / day 7-14 days to 5 days of normal temperature

- Levomycetin 80 mg / kg / day

5. Prevention

- Vaccination of high-risk groups

- Antibiotic prophylaxis is prescribed by contact (ciprofloxacin 0.4 g twice daily or doxycycline)

14. Erysipelas

1. The diagnosis of erysipelas was established according to the classification ICD-10 (A46 Erysipelas, erythematous-bullous form), taking into account the clinical and epidemiological criteria:

- Acute onset of fever and intoxication

- Later occurrence of local manifestations

- The patient has peculiar signs of inflammation of the skin (erythema with a clear outline - "flames", "geographical map" and the inflammatory roller on the periphery, the appearance of bullous and hemorrhagic elements, lack of rest), lymphangitis and regional fatigue with primary bladder and one that was previously observed once (repeated bladder), or a similar pathological condition that is repeated several times (in chronic bladder).

2. With mild and moderate disease, treatment is possible under the conditions of CPMSD.

In severe cases and complicated forms of erysipelas, hospitalization in an infectious hospital is required.

3. Antibacterial therapy (etiotropic) is a leading treatment for erysipelas. The antibiotic of choice is penicillin (1 million units 6 times a day for 7-10 days). Also used are aminopenicillins, cephalosporins, macrolites, fluoroquinolones. Pathogenetic therapy includes the following areas: dinit-toxic, anti-inflammatory. The basis of prevention of recurrence of erysipelas is systematic bicillin prophylaxis (bicillin-5), rehabilitation of chronic foci of infection, stabilization of chronic diseases, correction of the body's immune status.

15. Salmonellosis

1. The diagnosis of salmonellosis is established according to the classification ICD-10 (A02.0 Salmonellosis enteritis), taking into account the clinical and epidemiological criteria:

- Transmission mechanism - fecal-oral, animal products of avian origin (eggs, meat, milk, dairy products)
- Incubation period from 2-6 h to 2-3 days
- The main clinical form of salmonellosis is enteritis
- Fever
- intoxication
- Diarrheal syndrome with greenish discharge, dehydration or infectious-toxic shock
- Possible development of sepsis with tufts or septicemia

2. The examination of the patient should be included

- General blood test (leukocytosis, neutrophil shift of leukocyte formula to the left, eosinophilia, toxic granularity of neutrophils, acceleration of ESR)
 - Coprogram (starch grains, muscle fibers, undigested fiber, fats, fatty acid soaps, pathological impurities - mucus, leukocytes, uncommon erythrocytes)
 - Bacteriological examination of feces (with enteritis), blood and urine (with process generalization). The crops will be fed to dense differentiation media (bismuth-sulfite agar, Endo, Ploskireva), enrichment media, bile broth, MPB
 - Serological diagnosis is used at the end of 1 week and after 7-10 days. You can use RA (diagnostic titer 1: 160)
3. Patients with salmonellosis sepsis, severe enteritis, severe background diseases should be treated at the hospital.
 4. Antibacterial drugs are shown only in the dominant signs of distal colitis, development of complications (ITS, collapse, LV, acute cerebral circulation, myocardial infarction, otitis, endo- and myocarditis, thrombosis of mesenteric vessels). Preference is given to fluoroquinolones. The main focus of salmonellosis treatment is detoxification and rehydration measures. In cases of ITS, glucocorticosteroids are added to pathogenetic staining

16. Rabies

1. The diagnosis of rabies is established according to the classification ICD-10 (A82.0 Rabies), taking into account the clinical and epidemiological criteria:
 - The duration of the incubation period is 7 days-1 year, with an average of 30-90 days
 - A bite, a history of an animal being harbor
 - Clinical picture, which in a typical form undergoes three consecutive stages: predictors, arousal, paralytic.
 - Hydro-, aero-, acousticphobia
 - Excitement attacks
 - Hyper salivation
2. In the case of a sentence specific life-long diagnosis is possible
 - Examination of the cornea and biopsy of the nape of the neck using ELISA
 - Isolation of the virus from saliva by intracerebral infection of newborn mice or cultivation of the virus by tissue culture of murine neuroblastoma

- PCR with saliva of the patient

Postmortem diagnosis can be confirmed by the following methods:

- Detection in the nerve cells of the brain of the dead pathognomonic calves Negri

3. Immediate hospitalization in ORIT is shown

4. Therapeutic measures are aimed at reducing the patient's suffering (symptomatic treatment). Emergency prophylaxis is to administer a 1 ml anti-rabies vaccine according to the regimen 0, 3, 7, 14, 30, 90 days

17. Epidemic typhus

1. The diagnosis of typhoid fever was established according to the classification ICD-10 (A75.0 Epidemic louse fever caused by *Provassek's ricketty*), taking into account clinical and epidemiological criteria:

- The presence of patients and typhus, louse

- Acute onset of fever, headache

- Characteristic behavior of the patient with a tendency to excite the CNS (hallucinations, euphoria)

- Typical appearance of the patient; subtle hyperemia and puffiness of the face, red eyes with characteristic shine ("drunken face" and "rabbit eyes")

- Positive symptoms of Chiari, Landorf-Rosenberg, Godele-Remlinge, Deach

- Occurrence from 4-5 days of illness after temperature "incision" of a typical polymorphic rheolyoso-petechial rash on the body of the trunk and extremities with the appearance of secondary petechiae in the center of the roses

- Development during the height of typhoid status, delirium

- The prevalence of encephalitic disorders and meningeal disorders

- Moderate enlargement of the liver and spleen

- Characteristic temperature curve (duration 2-2,5 weeks) with two "indentations"

2. Specific diagnosis is carried out by serological reactions:

- Rickettsial Agglutination Reaction (PAP) - a first-order reaction, considered positive when diluting serum 1: 40-1: 80

- RNGA - secondary level reaction, diagnostic titer 1: 1000-1: 2000

- RNIF - the most sensitive, recommended by WHO as the gold standard, credits at the end of 1 week 1: 320-1: 2560, for 10-15 days - 1: 2560-1: 10240

3. All patients are subject to compulsory hospitalization
4. Apply etiotropic treatment (antibiotics, eg doxycycline), pathogenetic (detoxification, ACS, proteolysis inhibitors, anticoagulants, sedatives or tranquilizers)

18. Anthrax

1. The diagnosis of anthrax was established according to the classification ICD-10 (A22.0 Skin form of anthrax), taking into account clinical and epidemiological criteria:
 - Care of sick animals, whitening of dead animals, collapsing of meat, handling of contaminated raw materials (animal skin, etc., consumption of meat of unknown origin)
 - The appearance of the spot accompanied by itching and its rapid transformation (within a few hours) into a blister and then into an ulcer
 - The nature of the ulcer (dark scab, swollen roller, tricolor coloration of inflammation, no pain at the location of the ulcer)
 - Baby bubbles around the ulcer (symptom of "pearl necklace")
 - Jelly painless widespread tissue swelling
 - Shabby tremor of swelling when tapped with a percussion hammer (Stefanskiy symptom)
2. The examination of the patient includes the following items:
 - GBC (leukocytosis, neutrophilosis, acceleration of ESR)
 - UT (proteinuria, leucocyturia)
 - Bacterioscopic method
 - Bacteriological method
 - Biological method (infection of laboratory animals)
 - Serological reactions (RAS, RNA, ELISA)
 - Intracutaneous allergic test with anthraxin
 - PCR
3. The patient is subject to mandatory hospitalization in an infectious hospital
4. The patient is prescribed:
 - Etiotropic therapy (penicillin 1-2 million IU 6 times a day for 7-10 days)
 - Pathogenetic therapy (detoxification)

19. Lyme disease (systemic tick borreliosis, Lyme borreliosis)

1. The diagnosis of Lyme disease (systemic tick borreliosis, Lyme borreliosis) was established according to the classification ICD-10 (A 69.2 Lyme disease), taking into account clinical and epidemiological criteria:

- staying in endemic region, visiting the forest, finding squeezed mites
- presence of intoxication syndrome, fever
- typical migratory erythema at the site of suction mite (erythematous lesion of the skin with enlightenment inside)

2. Specific studies:

- serological studies (ELISA, RNIF)
- bacteriological examination (detection of pathogen in cerebrospinal fluid, skin biopsy)
- PCR

3. Treatment:

- Mild severity - outpatient treatment, moderate and severe severity - hospitalization
- Antibiotic therapy (doxycycline, amoxicillin or cephalosporins)
- Detoxification therapy

20. Measles

1. The diagnosis of measles was established according to the classification ICD-10 (B05.9Cirs without complications), taking into account clinical and epidemiological criteria:

- Contact with measles patients;
- Fever, intoxication, Stimson triad, Koplik spots;
- Expressed spotty-papular exanthema, which tends to merge, its descending sequence;

2. Complications of the disease: pneumonia, encephalitis.

3. Specific diagnosis - detection of measles virus IgM antibodies. Instrumental investigations - OGC radiography

4. Treatment principles: detoxification, antihistamines, vitamins.

5. The period of isolation of the patient up to 4 days after the rash.

Specific prevention – vaccination

21. Coronavirus infection, COVID-19

1. The diagnosis of coronavirus infection caused by SARS-Cov-2 virus was established according to the ICD-10 classification (U07.2 - COVID-19), taking into account clinical and epidemiological criteria:

- acute onset of fever and intoxication;
- sore throat, dry cough,
- loss of smell and taste,
- feeling short of breath and reduced SpO₂

2. Complications: Bilateral polysegmental pneumonia. ARD I-II stages - shortness of breath (BP - 28-30 per minute), SpO₂ - 90%, auscultatory in the lower parts of both lungs weakened breathing, crepitation.

3. The main method of laboratory diagnosis to confirm the diagnosis - detection of SARS-Cov-2 virus RNA by PCR, in addition, use rapid tests for rapid diagnosis (SARS-Cov-2 coronavirus antigen)

4. Non-specific laboratory diagnostics:

- General blood test to determine the level of erythrocytes, hematocrit, leukocytes, platelets, leukocyte formula;
- Biochemical blood tests (urea, creatinine, electrolytes, liver enzymes, bilirubin, glucose, albumin).
- Patients with signs of ARD are recommended to perform a coagulogram with determination of prothrombin time, international normalized ratio and activated partial thromboplastin time.
- Serum C-reactive protein (CRP) test. The level of CRP correlates with the severity of the course, the prevalence of inflammatory infiltration and the prognosis for pneumonia.

Instrumental research methods:

- Computed tomography of the lungs or review radiography of the chest in the anterior rectus and lateral projections;
- Electrocardiography in standard parameters is recommended for all patients.

5. In mild and moderate disease, treatment in an outpatient setting is possible. Severe and complicated forms of COVID-19 require hospitalization.

6. Specific disease prevention - vaccination.

22. Tularemia

1. The diagnosis was established according to the ICD-10 classification (A21 Tularemia) taking into account clinical and epidemiological criteria:

- contact with rodents, insect bites;
- consumption of water from open reservoirs;
- work in the field, warehouses, granaries, etc.;

clinical criteria:

- the presence of moderately painful large mobile lymph nodes (buboes), not connected to each other and adjacent tissues;
- long course of the disease

2. Clinical form - glandular (bubonic) - the presence of moderately painful large mobile lymph nodes (buboes), not connected to each other and adjacent tissues

3. Laboratory tests to confirm the diagnosis.

Bacterioscopic and bacteriological research is used, which is carried out in special laboratories. Material from patients (blood, tambourine puncture, discharge from skin ulcers, conjunctiva, tonsil plaque, sputum) is taken, if possible, in the first days of illness, before the use of antibiotics.

Serological tests: RA using tularemia diagnosticum; ELISA (detection of IgM and IgG antibodies).

PCR is considered promising.

4. Nonspecific diagnosis:

- General blood test
- General analysis of urine

5. Hospitalization in an infectious hospital is mandatory.

6. Etiotropic therapy. According to WHO recommendations, streptomycin is prescribed intramuscularly at a dose of 0.5 g 2 times a day for 7-10 days, for the treatment of pulmonary and generalized tularemia - 1 g 2 times a day. In severe cases, it is considered necessary to continue antibacterial therapy until the 5th or 7th day of apyrexia.

23. Acute brucellosis

1. The diagnosis of acute brucellosis was established according to the ICD-10 classification (A23.0 Brucellosis caused by *Brucella melitensis*), taking into account clinical and anamnestic data:

- acute onset with moderate intoxication, but an increase in temperature to 38-39° C, which tolerated satisfactorily,
- tachycardia, hypotension;
- symptoms of polyadenopathy - enlargement of all groups of peripheral lymph nodes up to 1 cm, mobile, painless, elastic;
- hepatolienal syndrome - enlargement of the liver and spleen;
- syndrome of musculoskeletal disorders - pain in the hip and knee joints, and a slight limitation of their mobility;
- syndrome of autonomic nervous system - the skin is moist, pale.

epidemiological history:

- Brucellosis in most cases is an occupational disease in livestock workers and enterprises that process animal products.

2. Studies required to confirm the diagnosis:

- Serological - Wright and Haddelson's reaction, ELISA, CFT in paired serums
- Bacteriological isolation of the pathogen from the blood
- PCR

3. Non-specific research methods:

- General blood test
- General analysis of urine
- Biochemical blood tests (CRP, proteinogram, ALT, AST, bilirubin)

Instrumental research:

- Ultrasound of the abdominal cavity –
Radiography of large joints

4. Etiotropic therapy: antibacterial drugs (doxycycline)

5. Pathogenetic and symptomatic treatment: detoxification therapy, nonsteroidal anti-inflammatory drugs.

24. Acute hepatitis C

1. The diagnosis of acute hepatitis C was established according to ICD 10 (B17.1 - acute HCV) taking into account clinical and epidemiological data:
 - belonging of the patient to risk groups - persons who use narcotic drugs parenterally; patients with hemophilia; medical workers;
 - presence of a history of surgery or manipulation (surgery, piercing, tattooing, manicure), hemodialysis or blood transfusions;
 - symptoms of asthenovegetative syndrome (weakness, malaise, decreased concentration and memory, increased fatigue), possible arthralgia and mild dyspepsia (nausea, loss of appetite, pain in the right hypochondrium);
 - subicteric sclera, hepatosplenomegaly.
2. The leading mechanism of HCV transmission is hemocontact (parenteral). Vertical and sexual transmission is possible, but is much less common.
3. Specific diagnosis: serum ELISA on anti-HCV IgM and detection of HCV RNA by PCR.
4. Non-specific research methods include: general analysis of blood and urine, biochemical blood tests (total bilirubin and its fractions, ALT, AST, thymol test). Instrumental method - ultrasound of the abdominal cavity
5. Today the main direction of treatment is the use of antiviral drugs of direct action - inhibitors of viral protease and polymerase.

25. Infectious mononucleosis

1. The diagnosis of infectious mononucleosis was established according to the ICD-10 classification (B27.0 Gammaherpesvirus infectious mononucleosis) taking into account clinical and epidemiological criteria:
 - age of the patient (up to 3 years or 15-18 years)
 - fever
 - moderate intoxication
 - tonsillitis
 - generalized lymphadenopathy
 - slight jaundice of the skin and sclera
 - hepatosplenomegaly

2. Research methods to confirm the diagnosis: - serological method (serum ELISA for aVEB IgM) - PCR (DNA VEB)
3. Among the general clinical methods of examination, a general blood test must be prescribed, which is characterized by leukocytosis, lymphomonocytosis, the appearance of a large number of atypical mononuclear cells;
biochemical blood tests: total bilirubin and its fractions, ALT, AST, thymol test.
Among instrumental methods of research, it is expedient to appoint ultrasound of abdominal organs.
4. Etiotropic treatment: antiviral drugs of the acyclovir group (valciclovir, ganciclovir)
5. Pathogenetic treatment: detoxification, short course of glucocorticosteroids.
Symptomatic therapy (NSAIDs, antiseptic solutions).

26. Toxoplasmosis

1. The diagnosis of toxoplasmosis was established according to the ICD-10 classification (B58.9 Toxoplasmosis, unspecified) taking into account clinical and epidemiological criteria:
 - living in rural areas,
 - contact with cats;
 - pregnancy, suspected fetal damage (congenital toxoplasmosis);
 - long-term (more than 3 weeks) increase in body temperature to subfebrile figures of unknown origin;
 - enlargement of peripheral lymph nodes (cervical, occipital, axillary, inguinal), if it cannot be explained by other reasons;
 - enlargement of the liver, spleen,
 - pain in muscles and joints.
2. The most typical ways of infection:
 - oral
 - contact
 - vertical
 - iatrogenic

3. It is necessary to consult an infectious disease specialist, obstetrician-gynecologist, suspected fetal lesions (congenital toxoplasmosis) and ophthalmologist, to exclude chorioretinitis

4. There are the following methods of specific diagnosis:

- parasitological method - detection of the pathogen during microscopy of blood smears, cerebrospinal fluid, amniotic fluid, placenta, abortion material
- serological methods (ELISA), which allow to confirm the presence of specific antibodies in serum, cerebrospinal fluid, amniotic fluid.
- PCR - detection of Toxoplasma DNA in the material taken from the patient (amniotic fluid, umbilical cord blood, cerebrospinal fluid);

5. Etiotropic treatment: antibiotics (doxycycline, spiramycin) and antiparasitic (chloroquine, metronidazole, pyrimethamine) drugs.

27. Rubella

1. The diagnosis of rubella was established according to the ICD-10 classification (B06.9 Rubella without complications) taking into account clinical and epidemiological criteria:

- acute onset of the disease;
- moderate increase in body temperature;
- moderate catarrhal symptoms;
- posterior cervical and, especially, bilateral occipital lymphadenopathy;
- small-spotted rash (lack of stages of the rash);
- contact with a patient who has had a similar rash.

2. Complications of pregnancy:

- fetal damage.

3. Non-specific laboratory diagnostics - general blood test, general urine test.

4. Methods of specific diagnosis - serological (detection of IgM antibodies to rubella virus), PCR.

5. Recommendations for pregnancy: detection of infection at an early stage (up to 14-16 weeks) is an absolute indication for abortion.

6. Principles of treatment - symptomatic therapy (NSAIDs, antihistamines)

7. Specific prevention - vaccination with live rubella vaccine or combined MMR vaccine.

28. Chickenpox

1. The diagnosis of chickenpox is established according to the ICD-10 classification: B01.9 Chickenpox without complications, taking into account clinical criteria:

- acute onset of fever, weakness and the appearance of itchy exanthema of vesicular nature,
- spread of elements over the entire surface of the skin, including the scalp on the first day of the disease,
- the phenomenon of "false" polymorphism,
- moderate catarrhal manifestations.

2. The most common complications of chickenpox:

- bacterial complications of the skin and subcutaneous tissue
- pneumonia
- false croup
- lesions of the nervous system - meningitis, meningoencephalitis
- lesions of the visual organ

3. Specific methods of disease diagnosis:

- detection of VZV DNA by PCR
- serological tests (ELISA)

4. General clinical studies:

- general blood test
- general analysis of urine

5. Etiotropic treatment:

- acyclovir-based antivirals indicated for complications of VZV infection, severe chickenpox, or at risk for complications.

6. Pathogenetic and symptomatic treatment: antipyretics, except acetylsalicylic acid (risk of Reye's syndrome), antipruritic drugs - antihistamines, treatment of rash elements with solutions of 1% methylene blue (aqueous solution).

7. Specific prevention: vaccination ("Varilrix").

8. Anti-epidemic measures:

- isolation of the patient up to 5 days after the appearance of the last elements of the rash

29. Yellow fever

1. The diagnosis of "yellow fever" was established according to the classification of ICD-10, taking into account clinical and epidemiological criteria:

- epidemiological history (stay in South America);
- acute onset of the disease;
- combination of hemorrhagic syndrome and jaundice;
- kidney damage;
- later occurrence of local manifestations

2. Research methods needed to confirm the diagnosis: virological examination, serological testing (ELISA), PCR.

3. Non-specific research methods:

- general blood test
- general analysis of urine
- biochemical studies: liver tests (total bilirubin and its fractions, ALT, AST, thymol test), kidney tests (urea, creatinine),
- coagulogram

4. Hospitalization in an infectious hospital is mandatory.

5. Main directions of treatment: Specific etiotropic therapy has not been developed. Pathogenetic therapy: detoxification therapy, hemostatic agents, antishock and glucocorticosteroids, hemodialysis in renal failure.

6. The leading means of prevention is vaccination.

30. Meningococcal infection: meningococemia.

1. The diagnosis of "Meningococcal infection: meningococcal disease" was established according to the ICD-10 classification, taking into account clinical and epidemiological criteria:

- acute onset of the disease
- fever and intoxication
- the presence of a characteristic hemorrhagic rash with necrosis in the center

- as well as epidemiological history (contact with a person with respiratory symptoms)
- 2. Complications - infectious-toxic shock (pale skin, pulse 110 beats per minute, blood pressure 85/50 mm Hg)
- 3. In moderate and severe meningococcal infection requires hospitalization in an infectious hospital.
- 4. Tests required to confirm the diagnosis: bacterioscopic and bacteriological examination of blood.
- 5. Non-specific studies: general blood test, general urine test.
- 6. The leading direction of etiologic therapy of meningococcal infection is antibacterial therapy. The antibiotics of choice are chloramphenicol or cephalosporins.
- 7. Pathogenetic treatment includes detoxification therapy, glucocorticosteroids and anti-shock drugs. Symptomatic treatment - NSAIDs