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DEPARTMENT OF CHILDREN'S DISEASES № 2

EDUCATIONAL AND METHODICAL RECOMMENDATIONS OF DISCIPLINE PEDIATRICS

Part IV

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Class in a subject:
"MEASLES, WHOOPING COUGH"

I. Scientific and methodical justification of a subject:

For the last decade, in connection with active immunization of the children's population, the incidence of measles and whooping cough among adult population increased. In this regard to the doctor of any specialty it is necessary not only to diagnose correctly these infectious diseases, but also to carry out necessary anti-epidemic and treatment.

II. Purpose of activity of students on occupation

The student has to know:

- etiology, pathogenesis, measles epidemiology;
- early diagnostic criteria of measles;
- clinical picture and complications of measles at children;
- differential and diagnostic criteria of measles, etc. the diseases proceeding from enantema;
- the main treatment in measles;
- role of active immunization in prevention of measles;
- the main anti-epidemic actions in the infection center.
- whooping cough etiopathogenesis;
- features of a clinical picture of whooping cough at children of a younger age group;
- methods of laboratory diagnosis of whooping cough;
- the basic principles of treatment and prevention of whooping cough at children.

The student has to be able:

- to collect the anamnesis (to reveal purposefully: possible contacts whether inoculations were carried out);
- to perform clinical examination of the patient;
- to appoint the plan of inspection of the patient;
- to carry out the assessment of datas of laboratory;
- to carry out the differential diagnosis;
- to appoint adequate treatment;

- to hold anti-epidemic events in the center.

III. Content of training.

1. Epidemiological characteristic of measles, whooping cough.
2. Characteristic and properties of causative agents of measles and whooping cough.
3. Preventive measures at identification of the patient in children's collective.
4. Etiopathogenesis, classification and clinical picture of measles and whooping cough.
5. Complications and causes of death in measles.
6. Treatment, preventive actions in measles.
7. Role and tasks of sanitary and epidemic service and organization anti-epidemic and preventive actions.

IV. Educational material security.

1. Visual aids: tables, schemes, multimedia presentations, videos.
2. Educational medical documentation (case histories, laboratory researches).
3. Technical means of training.
4. Literature.

V. The list of the recommended literature.

1. Children's diseases: the textbook / under the editorship of A.A. Baranov. – M.: GEOTAR-media, 2009. – 1008 pages.
2. Pediatrics: The textbook for medical schools. Under the editorship of N.P. Shabalov. – SPb: SpetsLit, 2006. – 895 pages.
3. Propaedeutics of children's diseases / to N.A. Geppa. – M.: GEOTAR-media, 2009. – 464 pages.
4. N.P. Shabalov. Neonatology: Manual. – M.: MEDpress-inform, 2009.
5. E.K. Tsybulkin. The menacing states at children. – M.: GEOTAR-media, 2007. – 226 pages.
6. V.F. Uchaykin, N.I. Nisevich, O.V. Shamsheva. Infectious diseases at children. – M.: GEOTAR-media, 2010. – 688 pages.
7. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Technique of a research of the child. The study guide for students. – Vladikavkaz, 2011. – 51 pages.

8. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Scheme of a case history. The study guide for students. – Vladikavkaz, 2011. – 38 pages.
9. Lectures on pediatrics.
10. Methodical instructions for out-of-class work of students of the 5th course of medical faculty on discipline "Pediatrics".

VI. List of questions for check of initial level of knowledge:

1. General patterns of epidemiology of infectious diseases.
2. Main kliniko-pathogenetic mechanisms of infectious diseases.
3. Clinical forms of infectious diseases: complications, immunity. Specific diagnostics.
4. Principles of therapy of infectious diseases (specific and nonspecific).
5. Clinic and treatment of infectious toxicosis.

VII. List of questions for check of final level of knowledge:

1. Call the main epidemiological features of measles.
2. Call patogmonichny symptomatology during the catarrhal period of measles.
3. Give characteristic of a skin enantema in measles.
4. At what children do mitigirovanny measles develop? What features does the clinical picture have at the same time?
5. What complications most often arise in measles?
6. Call the main events held contact with the patient with measles.
7. Call the clinical periods in whooping cough.
8. What clinical manifestations of whooping cough depending on the disease period?
9. Call features of a course of whooping cough at children of early age.
10. What complications can arise at patients with whooping cough?
11. Call the main treatment in whooping cough.
12. Measures of prevention of whooping cough.

Information block.

Measles

Etiology and epidemiology.

The virus of measles belongs to paramyxoviruses. Entrance infection atriums – a mucous membrane of upper airways and eyes. Measles are transmitted in the airborne way, an infection source – only sick, infectious from the moment of emergence of the first symptoms of a disease till 5th day from appearance of rashes (at a complication by pneumonia – till 11th day). The susceptibility to a disease is high at all age, children of the first three months of life are protected by maternal antibodies. After the postponed disease there is a lifelong immunity. The incubation interval is 8-17 days, and at the children receiving immunoglobulin, it can be extended up to 21 days.

Clinical picture.

The catarrhal (prodromal) period lasts 3-5 days, is followed by fervescence, cold, cough, conjunctivitis, emergence on a mucous membrane of cheeks of pathognomonic scaly spots of Belsky-Filatov-Koplika and an enantema on a soft and hard palate. The period of a rash begins new fervescence, rash bright, spotty and papular, appears in the first day behind ears, on a face and a neck, for the second day – on a trunk and for the third day – on extremities. From the fourth day the body temperature decreases, rash begins to fade in the same order, as developed, leaving pigmentation, quite often scaly peeling. In a prodromal stage the leukopenia and a neutropenia, in a rash stage – a leukopenia, an eosinopenia, thrombocytopenia are noted.

New fervescence usually testifies to complications, the most frequent of them is pneumonia. Other complications – otitis, laryngitis, stomatitis, a keratitis, colitis and a coloenteritis, pustulous damage of skin, are much more rare – encephalitis. Lethality in measles reaches 1-2% at the expense of complications. The Mitigirovanny form of measles arises after a seroimmunity and can proceed at the normal body temperature, weak symptomatology, with poor rashes. Measles at imparted by live clumsy vaccine can proceed in the erased form.

Diagnosis.

It is put according to clinical data, in doubtful cases retrospectively investigate credits of protivokorevy antibodies.

Treatment.

Symptomatic. Antibiotics are appointed only at complications (pneumonia, otitis) at severe forms of measles at children of early age, associated diseases and other indications.

Prevention.

Basis of prevention is active immunization. 12 months are more senior than the contact not vaccinated, not having measles children vaccinate (in the first 3-4 days), to children till 1 year and in the presence of contraindications to vaccination enter immunoglobulin (at contact by the patient with measles). The quarantine for not vaccinated is established from the 8th to the 17th day from the contact moment, for received immunoglobulin – up to 21st day.

Inoculation according to the calendar: administration of live vaccine in 12 months.

Tasks for independent preparation:

1. Solve situational problems and a test task.
2. Examine the patient describe the changes in the state of health in a workbook revealed by you.

Scheme of inspection of the patient.

When collecting the anamnesis pay attention on:

- epidemiological data in family, children's collective;
- features of feeding of the child, error in food;
- the diseases postponed earlier, the background pathology complicating a course of infectious process;
- inoculative anamnesis;
- the beginning and dynamics of a disease before arrival of the child in hospital;
- the treatment spent at home.

At an objective research to pay attention on:

- weight of a condition of the child, temperature reaction, neurologic status, meningeal signs;
- presence of symptoms of toxicosis;
- condition of a mucous membrane of an oral cavity (color, enantema, Filatov-Koplika's spots, pharynx hyperaemia), back wall of a throat, condition of a conjunctiva;
- color and humidity of integuments, nature of rash (spotty, papular, hemorrhagic), localization, emergence time;

- palpation of lymph nodes (the sizes, consistence, quantity, localization, mobility, change of skin over them, morbidity);
- condition of a respiratory system;
- condition of a cardiovascular system (the ABP, heart borders, symptoms of heart failure, characteristic of tones, existence of pathological noise at auscultation).

At interpretation of datas of laboratory:

1. in complete blood count test (maintenance of leukocytes, erythrocytes, hemoglobin, feature of a leukocytic formula, SOE);
2. serological blood test in dynamics (increase of an antiserum capacity);
3. data of RPGA;
4. biochemical blood test;
5. data of ultrasonography of abdominal organs (liver, spleen).
6. conclusion of the ENT specialist;
7. given to a thorax X-ray analysis.

Test control.

1) The incubation interval in measles is:
   a) 1-7 days;
   b) 8-17 days;
   c) 30 and more days;
   d) 25-30 days
2) In measles the antibacterial therapy is appointed:
   a) during a prodromal stage;
   b) at the height of a disease;
   c) in the presence of complications.
3) Rash in measles is characterized:
   a) contemporaneity of a rash;
   b) spotty and papular character;
   c) hyperemic background of skin;
   d) staging of a rash;
   e) tendency to merge of elements of rash.

4) Clinical signs of mitigirovanny measles:

a) toxic syndrome;

b) lack of symptoms of intoxication;

c) staging of a rash;

d) small rash without tendency to merge

e) the extended prodromal stage.

5) On a mucous membrane of a mouth in measles appear:

a) bubble rashes

b) enantema

c) filmy imposings

d) Filatov-Koplika's spots

6) Can be complications of measles:

a) meningitis

b) encephalitis

c) bronchitis

d) pneumonia

e) arthritis

7) In an initial stage of measles reveal:

a) expressed catarrhal phenomena from upper airways

b) the bright delimited pharynx hyperaemia

c) conjunctivitis

d) "papillary" language

e) fever

8) Epidemiological features of measles are:

a) high contagious index

b) general susceptibility

c) rather slow distribution of flash

d) possibility of transmission of infection by the waterway

e) durable immunity after the postponed disease

9) Active immunization against measles is carried out:

a) AKDS-vaccine

b) gamma-globulin

c) anatoxin

d) the live weakened virus vaccine

10) Causative agent of whooping cough:

A) Bordetella pertusis

B) Hemophilus infuenzae

11) Mechanisms of transfer of whooping cough:

A) airborne

B) fecal and oral

C) transplacental

D) parenteral

12) Children of the first month of life whooping cough:

A) are ill

B) are not ill

13) In time a reprise in whooping cough it is complicated:

A) breath

B) exhalation

14) Dissociation of the children contacting to sick whooping cough is supposed on:

A) 10 days

B) 14 days

C) 21 days

E) quantity of repriz during an attack

15) Point out weight of whooping cough:

A) vomiting during fits of coughing

B) frequency of fits of coughing

C) apnoea during cough

D) neurotoxicosis

16) Cough in the spasmodic period of whooping cough is distinguished:

A) reprises

B) apnoea

C) the "barking" character

17) Can be complications of whooping cough:

A) pneumonia

B) myocarditis

C) atelectasis

D) subarachnoidal hemorrhage

E) pyoderma

Situational tasks:

Task No. 1

The girl 3.5 years, came to a hospital for the 3rd day of a disease with complaints to high temperature, cough, cold. Grows and develops according to age. After a year 3 times were transferred by ORZ. Attends kindergarten.

The disease began sharply: temperature to 37.8□C rose, cough, cold developed. The called doctor diagnosed ORZ and appointed symptomatic treatment. Next day temperature increased to 38.5□C, the general state worsened, the headache, a sore throat developed.

At receipt: moderately severe state, temperature 38.2□C, child sluggish, pale, profound cold, dry cough, photophobia, hyperaemia of conjunctivas, injection of vessels of scleras. Pale, clean skin. Bright hyperaemia of handles, back wall of a throat, tonsils, mucous membrane of cheeks. On a transitional fold the molars have very small whitish rashes ("semolina") which are a little towering over a surface. On a soft palate a krupnopyatnisty enantema. Polyadenitis. In lungs without pathology. Tachycardia. Sonorous cardiac sounds. Soft, painless stomach. The liver is probed on 2 see belowa costal arch. A chair – without features.

Questions:

1. What diagnosis should be assumed in this case?
2. What symptoms should be expected a disease in the next days?
3. What treatment the patient should appoint. What prevention of this disease.

Task No. 2

The child of 3 months, came to boksirovanny department for the 14th day of a disease with the diagnosis: "SARS. Pneumonia?". Two weeks ago against the background of the normal temperature and good general condition there was cough which did not

respond to treatment, tended to increase, especially at night. It was observed by the doctor with the diagnosis of a SARS. In a week the cough became paroxysmal and was followed by concern, face reddening during an attack, and periodically came to an end with protrusion of language with vomiting. After an attack there occurred improvement. Out of an attack the pallor of integuments, some puffiness of the person was noted. At receipt: sluggish, pale, cyanosis of a nasolabial triangle. Hemorrhage in a conjunctiva of the right eye. Quiet pharynx. Lymph nodes are not increased. In lungs breath rigid, rattles are not listened. Distinct cardiac sounds. Soft, painless stomach. The liver acts from under edge of a costal arch on 1.5 cm. A spleen – at edge of a costal arch. A chair, a diuresis in N.

In department at the child about 25 fits of coughing in day were noted, at the same time periodically during an attack the vomiting was observed. A phlegm viscous and the child hardly coughed up.

General blood test: Ayr – 4,0 x 10 12/l, Nv-140 of g/l, Leyk – 30,0 x 10 9/l, p.b. – 3%, with / I am 20%, l – 70%, m – 7%, SOE of-3 mm/hour.

On the roentgenogram: strengthening of the bronkho-vascular drawing, improving transparency of pulmonary fields

Bacteriological research of slime from a nasopharynx – Bordetella pertussis stick is found

Questions:

1. Make the clinical diagnosis.
2. Carry out diff. diagnosis.
3. Appoint treatment.
4. What preventive actions exist in this disease.

Class in a subject: "SCARLET FEVER"

I. Scientific and methodical justification of a subject.

Despite decrease in incidence of scarlet fever, this infection still occur among the children's population, is more rare among adults.

In recent years scarlet fever considerably "matured". At the same time its diagnostics quite often is late since doctors often do not think of a possibility of a disease of adults of children's infections and are not familiar with some features of a clinical course of these diseases.

In this regard to the doctor of any specialty it is necessary not only to diagnose correctly it infectious a disease, but also to carry out necessary anti-epidemic and treatment.

II. Purpose of activity of students on occupation:

The student has to know:

- epidemiological features of scarlet fever;
- infection sources in this disease;
- ways of infection;
- susceptibility;
- incidence and lethality;
- pathogenesis scarlet fever;
- clinical picture of scarlet fever and also differential diagnostics;
- scarlet fever complications;
- methods of laboratory diagnostics;
- basic principles of treatment, prevention;
- features of a course of scarlet fever at adults.

The student has to be able:

- to collect epid. anamnesis;
- to perform objective examination;
- to appoint special laboratory researches, to estimate their results;
- to hold anti-epidemic events in the center (isolation, observation, prevention of a disease at contact).

III. Content of training:

1. Scarlet fever (etiology, epidemiology, pathogenesis, clinic, diagnostics, treatment).
2. Complications in scarlet fever.
3. Prevention in the center, work with contact.
4. Features of a course of scarlet fever at adults.

IV. Educational material security.

1. Visual aids: tables, schemes, multimedia presentations, videos.

2. Educational medical documentation (case histories, laboratory researches).
3. Technical means of training.
4. Literature.

V. The list of the recommended literature.

1. Children's diseases: the textbook / under the editorship of A.A. Baranov. – M.: GEOTAR-media, 2009. – 1008 pages.
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5. E.K. Tsybulkin. The menacing states at children. – M.: GEOTAR-media, 2007. – 226 pages.
6. V.F. Uchaykin, N.I. Nisevich, O.V. Shamsheva. Infectious diseases at children. – M.: GEOTAR-media, 2010. – 688 pages.
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8. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Scheme of a case history. The study guide for students. – Vladikavkaz, 2011. – 38 pages.
9. Lectures on pediatrics.
10. Methodical instructions for out-of-class work of students of the 5th course of medical faculty on discipline "Pediatrics".

VI. List of questions for check of initial level of knowledge:

1. General patterns of epidemiology of infectious diseases.
2. Main kliniko-pathogenetic mechanisms of infectious diseases.
3. Clinical forms of infectious diseases. Complications. Immunity.
4. Specific diagnosis of infectious diseases.
5. Principles of therapy of infectious diseases (specific and nonspecific).
6. Clinic and treatment of infectious toxicosis.

VII. List of questions for check of final level of knowledge:

1. Call the main epidemiological characteristics of scarlet fever.
2. Tell about the main links of pathogenesis in scarlet fever.
3. Describe the condition of a mucous oral cavity characteristic of scarlet fever.

4. Characterize skin rashes in scarlet fever. Differential and diagnostic criteria of a dieback in scarlet fever.

5. On what clinical signs the diagnosis "scarlet fever" can be made on 2-3 week of a disease.

6. What is the "scarlatinal" ("filatovsky") heart?

7. What complications can be in scarlet fever?

8. What methods of laboratory diagnostics does the patient need to appoint? What results do you expect to receive?

9. What treatment does the patient with scarlet fever need to appoint?

10. Prevention of scarlet fever, anti-epidemic work in the center.

Information block.

SCARLET FEVER

– the acute infectious disease which is characterized by symptoms of the general intoxication, a tonsillitis and an enanthesis.

Etiology.

The activator – a β-hemolytic streptococcus of group A. The persons who had scarlet fever gain usually durable immunity to it. However they do not become immune in relation to other forms of a streptococcal infection.

Scarlet fever represents one of manifestations of a streptococcal infection. However it is allocated from this group with existence of the expressed toxic component. As a result of the postponed scarlet fever the durable anti-toxic immunity which does not have standard specificity is developed. At the same time, as the bacterial immunity is type-specific and rather not resistant, in infection with other type of a streptococcus of people, the anti-toxic immunity which had scarlet fever and having, can ache with any other form of a streptococcal infection.

Epidemiology.

The main source of an infection is sick scarlet fever, the special epidemiological danger is constituted by patients of the scarlet fever erased by a form. Patients (children and adults) with a streptococcal tonsillitis and a nasopharyngitis can also be a source of an infection. The patient becomes infectious from the moment of a disease. Duration of the infectious period is definitely not established. However early use of penicillin in scarlet

fever promotes fast release of the patient from carriage of a streptococcus and at the smooth course of the disease (without complications) the child practically does not constitute epidemiological danger in 7-10 days from the beginning of a disease. In the presence of complications, especially purulent (purulent rhinitis, otitis, etc.), duration of the infectious period increases. The danger is constituted also by convalescents with chronic inflammatory diseases (adenoid disease, a nasopharyngitis). At these children longer carriage of a streptococcus is observed.

The infection is transmitted in the drop way at contact with the patient or the bacillicarrier. Transmission of infection through objects of use, a toy, clothes of patients is possible, transmission of infection through the infected products is proved (mainly milk). The contagious index makes about 40%.

From all incidence of scarlet fever of 90% it is the share of children up to 16 years. The greatest incidence is observed among children of preschool and early school age, children aged till 1 year get sick with scarlet fever seldom, children of the first half of the year of life especially seldom are ill.

The maximum of incidence of scarlet fever falls on the autumn and winter period.

After the postponed scarlet fever quite durable anti-toxic immunity, as a rule, is developed. However recently as a result of use of antibiotics for treatment of patients with scarlet fever the hyperimmunity is developed not always in this connection, cases of repeated scarlet fever became more frequent.

Pathogenesis and pathological anatomy.

Most often the infection gets to an organism through tonsils, is more rare – through the injured skin (wound or burn scarlet fever), a mucous membrane of a uterus (postnatal scarlet fever) and in some cases – through lungs.

The streptococcus causes inflammatory and necrotic changes in the place of implementation. On absorbent and blood vessels the activator gets into regional lymph nodes. Toxin of a hemolytic streptococcus, getting to blood and having tropism to vegetative endocrinely and neurovascular device, causes symptoms of the general intoxication, the shown high temperature, rash, defeat central in the autonomic nervous system and the cardiovascular device. Specific toxicosis, expressed to a degree, is noted in all cases of scarlet fever in the first 2-4 days of a disease.

By the end of the 1st at the beginning of the 2nd week the anti-toxic immunity begins to be developed.

Clinically septic line of pathogenesis is shown by purulent complications (lymphadenitis, purulent otitis, a mastoiditis, arthritis, etc.). Septic manifestations can arise irrespective of weight of an initial stage of scarlet fever.

At a toxic form of scarlet fever the sharp catarrh of a pharynx, throat and even gullet with superficial necrosis of an epithelium comes to light. Sometimes on a section of a tonsil find sites of necrosis. In a myocardium dystrophic changes. In sympathetic and parasympathetic ganglions of change in the basic of destructive character. In a brain acute swelling, sharp circulator disturbances.

The suppurative and necrotic focuses in septic scarlet fever can be localized in various fabrics and bodies (an ear, joints, serous cavities, kidneys – interstitial nephrite).

Clinical picture.

The incubation interval lasts 2-7 days more often, but can be shortened about one day and be extended up to 12 days.

The disease, as a rule, begins sharply. Among full health temperature increases, there are vomiting and a sore throat. In several hours it is possible to notice appearance of rash which very quickly extends to the person, a neck, a trunk and extremities. Sometimes rash develops for the 2nd day and later from an onset of the illness.

The punctate rash on a hyperemic background of skin is characteristic of scarlet fever. On a face the rash especially densely is located on cheeks which become bright red, especially shading ***the pale, not covered with rash nasolabial triangle***. More saturated rash is noted on the side surface of a trunk, in the bottom of a stomach, on the flexion surfaces of extremities, especially in natural folds of skin: in axillary, inguinal, elbow, popliteal areas. Quite often along with punctate rozeolezny rash in these parts can be and small petechias, sometimes rash happens drain. The white dermographism, is distinct.

Rash can be papular when skin takes kind of a shagreen form. Melkopyatnista or hemorrhagic. In more hard cases the rash has a tsianotichesky appearance. The dermographism at the same time is mild, faltering. Scarlet fever can be also without rash (atypical form).

The xeroderma is characteristic of scarlet fever. Rash usually sticks to 3-7 days, disappearing, it does not leave pigmentation. After deflorescence the peeling, in the beginning in places where more gentle skin (lobes of ears, a neck, a scrotum), and then and on all trunk begins. Typically for scarlet fever the macrolaminar peeling, especially on brushes and toes, but can be also small, scaly peeling on lobes of ears, on a neck, At children of chest age the peeling is usually significant very poorly. More plentiful peeling happens after miliary rash.

Tonsillitis – a constant symptom of scarlet fever. The bright hyperaemia of a pharynx (tonsils, a uvula, handles) which is not extending to a mucous membrane of a hard palate is typical. The scarlatinal angina can be catarrhal, follicular, necrotic and false and fibrinous.

Mucous membranes of an oral cavity dry. Language is densely imposed with a gray-yellow plaque in the beginning, from the 2-3rd day begins to be cleaned with edges and a tip, becomes bright red with the expressed nipples ("crimson language"). This symptom keeps during 1-2 weeks.

According to extent of damage of a pharynx are involved in process and regional lymph nodes. They become increased, dense, painful at a palpation. In the cases which are followed by pharynx necroses the cervical cellulose surrounding lymph nodes (periadenitis, an adenoflegmon) also is involved in process.

The expressiveness of symptoms of the general intoxication and high temperature correspond to weight of a disease. Easy forms of scarlet fever can proceed at a normal temperature and without the profound intoxication. At severe forms high temperature (up to 39-40 °C and above), repeated, sometimes pernicious vomiting, a severe headache, slackness, drowsiness, in toxic cases – the darkened consciousness, nonsense, spasms, meningeal symptoms are always observed. Duration of the feverish period also corresponds to weight of a disease. In mild cases temperature is normalized in 2-3 days, in heavier, especially followed by extensive necroses, temperature increase keeps till 7-9th day from an onset of the illness longer.

Cardiovascular changes in scarlet fever in the form of "infectious" heart usually keep during 2-4 weeks, sometimes and more (within 3-6 months from the date of a disease). Further they are liquidated.

From blood in an initial stage the leukocytosis of neutrophylic character with shift is noted to the left. SOE is raised. In process of normalization of temperature the eosinophilia and a leukopenia are sometimes noted.

Classification of clinical forms of scarlet fever.

The classification offered by A.A. Koltypin is standard. It assumes division of scarlet fever on type, weight and a course.

Typiforms differ ***on weight***: easy, medium-weight and heavy. Besides, are allocated transitional from lungs to medium-weight and from medium-weight to heavy. Indicators of weight are as the general symptoms of intoxication (defeat of CIS and the vascular system and the vegetative and endocrine device), and local changes – extent of damage of a pharynx and regional lymph nodes.

Carry *the erased forms* at which all symptoms are very mild and short-term to group ***of atypical***, some of them can absolutely be absent. These are usually the easiest forms of scarlet fever.

Ekstrabukkalny forms (burn, wounded, postnatal) are characterized by a short incubation interval, absence or very mild tonsillitis. Rash begins and is more saturated about entrance gate.

Carry forms with aggravirovanny symptoms to atypical – *hypertoxical* and *hemorrhagic* at which process develops so violently and hard that death comes before symptoms, typical for scarlet fever develop (rash, a tonsillitis, damage of lymph nodes). Such patients usually arrive with the diagnosis "Encephalomeningitis" or "Food toxicoinfection" and die in 1-2 days at the collapse phenomena as a result of sharp damage of the nervous, vascular system and the endocrine and vegetative device. These forms meet exclusively seldom.

Complications.

The most frequent complications of scarlet fever: lymphadenitis, otitis, sinuitis, mastoiditis, nephrite, synovitis, purulent arthritis, etc. Complications arise on the 2-3rd week from the beginning of a disease more often. Two factors – an allergy and consecutive infection a streptococcus of the same or other serovar play a role in genesis of complications.

Allergic complications (simple lymphadenitis, synovitis, nephrite) develop usually in the second period of a disease. Purulent complications can arise both in early, and in late terms of a disease. They are more often observed at children of early age.

Outcomes.

Now scarlet fever is a slight disease, as a rule, with a favorable outcome. Patients with an adenoid disease and at the children sick with rheumatism, in the scarlet fever convalescence period quite often have a long subfebrile condition, various complications and also there can be an aggravation of rheumatic process.

Scarlet fever differs in a number of features now: existence of mainly easy forms of a disease, lack of purulent complications, fast sanitation of an organism from a hemolytic streptococcus that is reached by early use of penicillin and creation of the correct conditions of hospitalization excluding reinfection (simultaneous filling of chambers with patients).

Diagnosis and differential diagnosis.

Recognition of scarlet fever in typical cases does not present difficulty. Difficulties arise at late arrival of patients when rash already turned pale. Promote diagnostics "saturation" of skin folds which keeps longer, than rash on other sites of skin, existence of petechias on a neck, in underarms and "crimson language". It is also necessary to pay attention to xeroderma and early peeling on lobes of ears and on a neck.

In later period (on the 2-3rd week) diagnosis of scarlet fever is based on detection of lamellar peeling, manifestations of "scarlatinal heart". Presence of lymphadenitis also facilitates diagnosis of scarlet fever in this period, certainly, at the same time it is necessary to consider the anamnesis and an epidemiological situation in the patient's environment.

At diagnostics of the erased form of scarlet fever it is necessary to be guided generally by the nature of damage of a pharynx (the delimited hyperaemia of a soft palate from a pale hard palate). Single vomiting in an onset of the illness quite often happens also at the erased scarlet fever form.

It must be kept in mind the scarlatiniform rash arising in a prodromal stage of measles and in chicken pox.

Babies a reason for wrong diagnosis of scarlet fever can have an emergence of a heat rash. Various medicines (streptocides, antibiotics, etc.) can cause scarlatiniform rash. However rash at the same time is located on not changed skin background, it is more on extensor surfaces, does not spare a nasolabial triangle and has more rough character. In rare instances scarlet fever should be differentiated from exudative diathesis.

Treatment

Treatment of patients with an easy form of scarlet fever under the corresponding conditions (opportunity to isolate the patient in the separate room) is carried out in house conditions.

Scarlatinal departments have to consist of chambers on 2-3 persons. Filling of these chambers with patients is carried out at the same time within 1-2 days. Patients of one chamber should not have contact with patients of other chamber. It excludes a possibility of cross infection with a streptococcus.

Regime of the patient within 5-6 days bed. Food has to correspond to age of the child and contain all necessary food ingredients.

Considering that even at an easy form of scarlet fever there can be complications, it is recommended to apply antibiotics irrespective of weight of a disease.

Duration of a course of antibiotic treatment is 5-7 days. It is the most reasonable to apply penicillin intramusculary 2 times a day at the rate of 20000 PIECES/kg of body weight or Bicillinum-3 once intramusculary in a dose of 20000 PIECES/kg of body weight, but no more than 800,000 PIECES.

To treatment of a septic form penicillin is applied in a dose by not less than 50000 PIECES/kg of the body weight (daily dose) 3 — 4 times a day. At treatment in house conditions it is convenient to use phenoxymethylpenicillin inside. Its daily dose doubles in comparison with intramuscular introduction and is given in 3-4 receptions.

Treatment of complications is carried out by the general rules depending on their character. At purulent complications (otitis, lymphadenitis, a sinuitis, etc.) antibiotics appoint. Early prescription of antibiotics in otitises and lymphadenites warns suppuration. Except antibiotics, appoint symptomatic therapy (UVCh, quartz, dry heat); according to indications the operational treatment is carried out. Treatment in nephrites includes a bed rest, a diet, antibiotics.

Prevention.

Specific prevention of scarlet fever is not developed.

General measures of prevention come down to early detection and isolation of a source of scarlet fever. The children who got sick with scarlet fever are hospitalized in hospital or isolated in house conditions for a period of 10 days from the moment of a disease. It is possible to send to child care facility of the child in 22 days from the beginning of a disease. In child care facilities in the center of scarlet fever are isolated as well patients with a tonsillitis (children and adults). They are not allowed in children's collectives within 22 days from the date of their disease (as well as patients with scarlet fever).

Children with heavy and not severe form of scarlet fever and when in house conditions it is impossible to isolate the child are subject Wednesdays to obligatory hospitalization and to provide him the corresponding care. Discharge from hospital is made according to clinical indications and in the absence of complications and inflame the telny phenomena in a nasopharynx, but not earlier than 10 days from the beginning of a disease.

After discharge from hospital or isolation at home children are not allowed in preschool child care facilities in the 1st and in the 2nd by classes of school within 12 days after clinical recovery.

At contact for preschool children and children of the 1st and 2nd classes of school the quarantine for 7 days from the moment of isolation of the patient is established. Final disinfection in the center is not carried out.

Task for independent work:

1. Solve situational problems and tasks of test control.
2. Examine the patient and describe the revealed changes in state of his health.

Scheme of inspection of the patient.

When collecting the anamnesis pay attention on:

- Epid. anamnesis: disease source, contacts, incubation interval, visit of child care facilities).
- Inoculations.

- The background diseases complicating a course of infectious process.
- Presence of perinatal encephalopathy.
- Presence of exudative diathesis, allergic diseases or reactions, intestinal dysbacteriosis.

At an objective research to pay attention on:

- Weight of a state, temperature reaction, neurologic status, meningeal signs, defeat peripheral and central nervous system, severity of infectious toxicosis.
- State mucous mouth, conjunctiva (color, dieback, its localization, color of language), condition of a pharynx.
- Condition of integuments, nature of rash (description, emergence time, localization), peeling (character, localization).
- Condition of hypodermic cellulose of a neck.
- Palpation of lymph nodes (size, consistence, morbidity, mobility).
- Condition of a cardiovascular system (ABP, vascular insufficiency, "infectious heart", myocardites).
- Sizes of a liver and spleen.
- Existence of the dysuric phenomena, color of urine, daily urine.
- Survey of other bodies and systems.

At interpretation of datas of laboratory:

- Complete blood count test (leukocytosis, leukocytic formula, SOE)
- Analysis of urine.
- Bacteriological research smears from a pharynx and a nose).
- Serological blood test in dynamics (increase of an antiserum capacity).
- ECG, FKG, EhoKG.

Situational tasks.

Task No. 1

Seryozha M. 5 years. Ached sharply: there was a weakness, a sore throat, temperature 38.2ºæ. At survey: pale integuments, on the flexion surface of extremities, it is especially dense in natural folds (inguinal, axillary, elbow bends) and the side surface of a

trunk the punctate rash on a hyperemic background of skin, without tendency to merge, single petekhialny elements is found. The resistant white dermographism is defined. Rash is densely located on a face, leaving clean a nasolabial triangle. At survey of a pharynx the profound hyperaemia of handles comes to light, tonsils are increased, hyperemic, in lacunas purulent contents, mucous a hard palate pale, language at a root is densely imposed with a grayish plaque, a language tip clean, with the expressed nipples. Submaxillary lymph nodes of 1.5 cm in size, dense, painful at a palpation. In lungs vesicular breath sound. Cardiac sounds are moderately muffled, ChSS – 100 in 1 min. the ABP – 100/70 mm Hg. On other bodies without features.

Questions:

1. Make the preliminary diagnosis. Prove it.
2. Appoint additional inspection.
3. Make the treatment plan.

Test control.

1. Rash in scarlet fever:
    a) papular
    b) punctulate
    c) vesicular
2. Infection source in scarlet fever can be a sick tonsillitis:
    a) truly
    b) incorrectly
3. Causes scarlet fever:
    a) beta and hemolytic streptococcus of group and
    b) group streptococcus in
    c) green streptococcus
4. Scarlet fever incubation interval:
    a) 2 – 3 hours
    b) 2 – 7 days
    c) 9 – 21 days
5. For treatment of the patient with scarlet fever appoint:
    a) penicillin

b) lincomycin

c) Oletetrinum

6. Ways of transfer of scarlet fever:

a) airborne

b) food

c) contact and household

d) transplacental

7. At the beginning of scarlet fever come to light:

a) xeroderma

b) punctate rash on a hyperemic background to skin

c) spotty and papular rash on not changed skin background

d) lamellar peeling

e) white dermographism

8. The most typical complications in scarlet fever are:

a) otitis

b) croup syndrome

c) lymphadenitis

d) glomerulonephritis

e) polyradiculoneuritis

9. Are characteristic of "scarlatinal" heart:

a) tachycardia

b) bradycardia

c) decrease in the ABP

d) increase in the ABP

e) systolic noise

10. Scarlet fever at children of the first year of life proceeds:

a) with a mild toxic syndrome

b) in a hypertoxical form

c) with a necrotic tonsillitis

d) with not plentiful rash

e) with complications in the form of otitis, lymphadenitis

Class in a subject:
"RUBELLA, CHICKEN POX, EPIDEMIC PAROTITIS"

I. Scientific and methodical justification of a subject:

For the last decade, in connection with active immunization of the children's population, the incidence of a rubella, epid increased. parotitis among adult population. In this regard to the doctor of any specialty it is necessary not only to diagnose correctly these infectious diseases, but also to carry out necessary anti-epidemic and treatment.

II. Purpose of activity of students on occupation

The student has to know:

- etiology, pathogenesis, epidemiology:
  a) rubellas
  b) chicken pox
  c) epid. parotitis
- classification, clinical picture and complications epid. parotitis;
- differential and diagnostic criteria of a rubella, etc. the diseases proceeding from enantema;
- clinical picture of a rubella at children, manifestations of a congenital rubella;
- the main treatment in a rubella, chicken pox, epid. parotitis;
- role of active immunization in prevention epid. parotitis and rubella;
- the main anti-epidemic actions in the infection center.

The student has to be able:

- to collect the anamnesis (to reveal purposefully: possible contacts whether inoculations were carried out);
- to perform clinical examination of the patient;
- to appoint the plan of inspection of the patient;
- to carry out the assessment of datas of laboratory;
- to carry out the differential diagnosis:
  a) chicken pox;
  b) rubellas;

c) epid. parotitis;

- to appoint adequate treatment;
- to hold anti-epidemic events in the center in these infections.

III. Content of training.

8. Epidemiological characteristic of chicken pox, rubella, epid. parotitis.
9. Etiopathogenesis, classification and clinical picture of chicken pox, rubella, epid. parotitis.
10. Clinical picture and complications in chicken pox, a rubella, epid. parotitis.
11. Principles of therapy, prevention and complications of chicken pox, rubella, epid. parotitis.
12. Preventive measures at identification of the patient in children's collective.
13. Congenital rubella.
14. Role and tasks of sanitary and epidemic service and organization anti-epidemic and preventive actions.

IV. Educational material security.

1. Visual aids: tables, schemes, multimedia presentations, videos.
2. Educational medical documentation (case histories, laboratory researches).
3. Technical means of training.
4. Literature.

V. The list of the recommended literature.

1. Children's diseases: the textbook / under the editorship of A.A. Baranov. – M.: GEOTAR-media, 2009. – 1008 pages.
2. Pediatrics: The textbook for medical schools. Under the editorship of N.P. Shabalov. – SPb: SpetsLit, 2006. – 895 pages.
3. Propaedeutics of children's diseases / to N.A. Geppa. – M.: GEOTAR-media, 2009. – 464 pages.
4. N.P. Shabalov. Neonatology: Manual. – M.: MEDpress-inform, 2009.
5. E.K. Tsybulkin. The menacing states at children. – M.: GEOTAR-media, 2007. – 226 pages.

6. V.F. Uchaykin, N.I. Nisevich, O.V. Shamsheva. Infectious diseases at children. – M.: GEOTAR-media, 2010. – 688 pages.
7. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Technique of a research of the child. The study guide for students. – Vladikavkaz, 2011. – 51 pages.
8. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Scheme of a case history. The study guide for students. – Vladikavkaz, 2011. – 38 pages.
9. Lectures on pediatrics.
10. Methodical instructions for out-of-class work of students of the 5th course of medical faculty on discipline "Pediatrics".

VI. List of questions for check of initial level of knowledge:

1. General patterns of epidemiology of infectious diseases.
2. Main kliniko-pathogenetic mechanisms of infectious diseases.
3. Clinical forms of infectious diseases: complications, immunity. Specific diagnostics.
4. Principles of therapy of infectious diseases (specific and nonspecific).
5. Clinic and treatment of infectious toxicosis.

VII. List of questions for check of final level of knowledge:

1. Call the main epidemiological characteristics of chicken pox.
2. Tell about the main links of pathogenesis in chicken pox.
3. Describe the condition of a mucous oral cavity, a conjunctiva of eyes characteristic of chicken pox.
4. Characterize skin rashes in chicken pox. Differential and diagnostic criteria of a dieback in chicken pox.
5. What complications can be in chicken pox? What treatment at the same time is appointed?
6. Describe changes of sialadens in epidemic parotitis.
7. What complications, are characteristic of epidemic parotitis?
8. What symptoms are characteristic of meningitis of a parotitis etiology?
9. What clinical laboratory signs are characteristic of pancreatitis of a parotitis etiology?
10. Describe changes from genitals at the complicated course of a parotitis infection at

boys.

11. Give characteristic to specific prevention of epidemic parotitis.
12. Call features of epidemiological process in a rubella at children.
13. Call the main manifestations of a congenital rubella.
14. What main clinical symptoms of a rubella do you know?
15. Call measures of prevention of a rubella.

Information block.

CHICKEN POX (Varicellae).

Chicken pox – the acute infectious disease which is characterized by emergence on skin and mucous membranes of small bubbles with transparent contents.

Etiology.

The activator – a large virus, contains DNA, letuch, but is unstable in external environment, is not pathogenic for animals. The identity of viruses of chicken pox and the surrounding herpes is established.

Epidemiology.

Source of an infection is the patient, since last (1-2) days of an incubation interval and within 3-4 days of a rash. The patient at the beginning of a rash is especially infectious. Sick Herpes zoster can be a source of infection also. Infection occurs in the airborne way.

Susceptibility to chicken pox high. Often children aged up to 10-12 years are ill. Children of the first 2-3 months of life exclusively seldom have chicken pox in connection with presence of transplacental immunity from mother. After the postponed chicken pox there is a durable immunity.

Clinic.

Incubation interval from 11 to 21 days (on average 14 days).

The disease begins with short-term a prodrome (subfebrile temperature and deterioration in the general state). In the period the prodrome sometimes appears scarlatiniform or korepodobny rash. More often this rash develops in the period of the maximum rash of varicellous elements.

Usually the disease begins sharply with temperature increase and varicellous rash almost at the same time develops. The rash occurs attacks within 2-4 days. Rash can on all

departments of a body and on mucous membranes. Primary element of rash – a small spot or the papule towering over skin which in several hours turn into a vesicle with hyperaemia around it.

Varicellous bubbles of round shape are located on neinfiltrirovanny skin. Bubbles through 1-2dnya are opened, dry up, on their place crusts after which falling away, hems it is not formed are formed.

As varicellous elements pour out not at the same time, and kind of tolchkoobrazno with intervals 1-2 days, on skin it is possible to see the elements which are at different stages of development (spot papule, a bubble, a crust). This so-called false polymorphism of skin eruption is characteristic of chicken pox. Each new podsypaniye is followed by the next temperature increase. Varicellous elements can pour out on a hairy part of the head, on mucous membranes of a mouth, nasopharynxes, an eye, is more rare a throat, genitals. Quite often they are complicated by accession of a bacterial infection.

In typical medium-weight cases the chicken pox is followed by the small intoxication which is moderately raised by temperature, a plentiful rash and a small itching of skin. In process of drying of vesicles temperature is normalized and the condition of the child improves.

Carry to atypical forms;

- *rudimentary form* at which the disease is followed by emergence single, insufficiently developed, bubbles with slight increase of body temperature or against the background of normal temperature. The general condition of the child at the same time is not broken;
- *generalized (visceral) form* which is followed by a hyperthermia, heavy intoxication and damage of internals. It is very rare form of a disease;
- *hemorrhagic form* which is found also seldom. At the same time the maintenance of bubbles has hemorrhagic character. Hemorrhages in skin, mucous membranes, nasal bleedings and a hematemesis are observed;
- *gangrenous form* at which in an environment of hemorrhagic bubbles the inflammatory reaction appears then the necroses covered with a bloody scab after which falling away deep ulcers with a dirty bottom and the subdug edges are bared are formed. Ulcers increase in sizes, merge among themselves. These forms arise at

the exhausted, weakened patients, at bad leaving when the possibility of accession of secondary microbic flora appears. The course of gangrenous forms long, quite often accepts septic character;

- *bullous form* at which along with usual big bubbles with rather turbid contents arise varicellous bubbles.

Diagnosis.

Difficulties in diagnostics arises at atypical forms. In last years the differentiation of chicken pox from natural had the greatest value. Now natural smallpox is liquidated practically worldwide, however it is necessary to remember it.

Chicken pox in typical cases comes to an end with recovery. Deaths are observed only at malignant forms (generalized, gangrenous, hemorrhagic).

Complications.

Can arise in connection with accession of secondary microbic flora. Lymphadenitis, an ugly face, abscess, phlegmon are observed. The encephalomeningitis arising sometimes for the 5-7th day of chicken pox, apparently, has the virus and allergic nature.

Treatment.

Specific and etiotropic treatment does not exist. It is necessary to watch purity bed and underwear, purity of hands (prevention of purulent complications). Elements of rash grease 5% with solution of potassium permanganate or 1% solution of diamond green. At severe forms enter immunoglobulin (3-6 ml intramusculary), glucose solutions intravenously; pour plasma and blood-substituting liquids. At purulent complications appoint antibiotics (penicillin, tetracycline, etc.).

Prevention.

The patient is isolated by houses. Hospitalization are subject children with the heavy or complicated forms of chicken pox. In the presence of an encephalomeningitis the hospitalization is obligatory. The children of babyhood (to the 3rd) who were in contact with the patient of chicken pox and not being ill earlier are isolated from collective from the 11th to the 21st day from the moment of contact.

Specific prevention in a number of the countries is carried out by means of live vaccine.

RUBELLA.

Etiology and epidemiology.

The disease-producing factor belongs to group of viruses, entrance gate of droplet infection – airways, a source – the patient infectious during a prodromal stage and the first 5-7 days later began rashes. The rubella at pregnant women can lead to pre-natal infection of a fruit. The incubation interval 15-24 days, is more often than 16-18 days.

Clinical picture.

The easy catarrhal phenomena at small body temperature, increase in zadnesheyny, occipital lymph nodes, sometimes the enantema, rash on a face and a neck which is quickly extending on all body spotty and papular.

Emergence in peripheral blood of plasmocytes (to 10-12%), a leukopenia, a lymphocytosis is characteristic.

Complications are rare (thrombocytopenia, encephalitis).

Diagnosis.

It is put according to clinical data, it can be confirmed serological.

Treatment.

Symptomatic.

Prevention.

The patient is isolated for 5 days from the date of appearance of rash. Are carried out vaccination by live vaccine in 12 months, 6 years (both boys and girls), in 13 years (only girls).

EPIDEMIC PAROTITIS.

Etiology, epidemiology.

Disease-producing factor – a paramyxovirus, entrance gate – upper airways, an infection source – the patient infectious from the last days incubations and within 7-9 days from the beginning of a disease, a way of transfer – airborne. The incubation interval 11-23 days, is more often than 15-18 days.

Clinical picture.

The beginning of a disease is characterized by pasty swelling of a parotid gland, fervescence, morbidity when chewing and swallowing.

Submaxillary (submaxillaritis) sialadens, genitals, in some cases – hypoglossal sialadens, a pancreas and other ferruterous bodies can be involved in process. Typical for a

parotitis infection it is necessary to consider also damage of central nervous system (serous meningitis, an encephalomeningitis).

The defeat of any ferruterous body or central nervous system which is found in combination with parotitis or separately should be considered manifestation of a parotitis infection, but not its complication.

Complications.

Meet seldom. Polyneurites, paralyzes of cranial nerves, purulent otitises, etc. are described.

Diagnosis.

It is put according to clinical data, it can be confirmed serological. The urine research on amylase level can assist in diagnostics.

Treatment.

Symptomatic treatment.

Prevention.

Isolation of the patient for 9 days from the beginning of a disease, dissociation of contact children from 11 to 21 days from the contact moment. Active immunization by live vaccine in 12 months and 6 years is carried out.

Tasks for independent preparation:

1. Solve situational problems and a test task.
2. Examine the patient describe the changes in the state of health in a workbook revealed by you.

Scheme of inspection of the patient.

When collecting the anamnesis pay attention on:

- epidemiological data in family, children's collective;
- features of feeding of the child, error in food;
- the diseases postponed earlier, the background pathology complicating a course of infectious process;
- inoculative anamnesis;
- the beginning and dynamics of a disease before arrival of the child in hospital;
- the treatment spent at home.

At an objective research to pay attention on:

- weight of a condition of the child, temperature reaction, neurologic status, meningeal signs;
- presence of symptoms of toxicosis;
- condition of a mucous membrane of an oral cavity (color, enantema, hyperaemia of a pharynx, output channels of sialadens), back wall of a throat, condition of a conjunctiva;
- color and humidity of integuments, nature of rash (spotty, papular, hemorrhagic), localization, emergence time;
- condition of a hypodermic and fat layer, presence of hypostases, swellings of zaushny area;
- palpation of lymph nodes (the sizes, consistence, quantity, localization, mobility, change of skin over them, morbidity);
- condition of a respiratory system;
- condition of a cardiovascular system (the ABP, heart borders, symptoms of heart failure, characteristic of tones, existence of pathological noise at auscultation);
- survey of genitals (the sizes, puffiness of testicles, a dermahemia, morbidity at a palpation);
- sizes of a liver and spleen, condition of intestines, dispepsichesky disorders.

At interpretation of datas of laboratory:

1. in complete blood count test (maintenance of leukocytes, erythrocytes, hemoglobin, feature of a leukocytic formula, SOE);
2. serological blood test in dynamics (increase of an antiserum capacity);
3. data of RPGA;
4. biochemical blood test (blood amylase, urine diastase);
5. liquor research (cytosis, morphological characteristic of uniform elements, protein content, chlorides, sugar);
6. data of ultrasonography of abdominal organs (liver, spleen, pancreas).

Test control.

1. Are characteristic of typical chicken pox:

a) fever

b) cough

c) cold

d) abdominal pain

e) vesicular rash

2. Can be complications of chicken pox:

a) glomerulonephritis

b) meningitis

c) encephalitis

d) phlegmon

3. Encephalitis in chicken pox is:

a) clinical implication

b) complication

4. The incubation interval in chicken pox is:

a) from 8 to 17 days

b) from 11 to 21 days

c) from 8 to 21 days

d) from 2 to 7 days

5. Specific prevention of chicken pox is carried out:

a) live attenuated vaccine

b) gamma-globulin

c) it is not carried out

6. In chicken pox the prescribing of corticosteroid hormones is shown:

a) at a severe form

b) at emergence of purulent complications

c) in encephalitis

d) in pharyngitis

7. Antibacterial therapy in chicken pox is carried out:

a) at emergence of vesicles on mucous membranes of an oral cavity

b) at emergence of purulent complications

c) in encephalitis

d) for the purpose of prevention of complications

8. The surrounding herpes arises at the person who transferred:

a) herpes simplex

b) chicken pox

c) infectious mononucleosis

9. At contact with sick "herpes zoster" the child can get sick:

a) the surrounding herpes

b) herpes simplex

c) chicken pox

10. Rashes in chicken pox arise:

a) within several days tolchkoobrazno:

b) step by step: in the 1st day of a disease – on a face,

in the 2nd day of a disease – on a trunk,

for the 3rd day of a disease – on extremities

11. Polymorphism of skin eruption in chicken pox:

a) false

b) true

12. Chicken pox is told:

a) in the fecal and oral way

b) airborne

c) parenterally

d) in the transplacental way

13. Rubella children aged have more often:

a) till 1 year

b) 1-7 years

c) 7-10 years

14. Infection of children with a rubella occurs:

a) transplantsentarno

b) through breast milk

c) in the airborne way

d) in the kontakno-household way

e) in the fecal and oral way

e) parenterally

15. The main symptoms of a rubella are:

a) spotty and papular rash

b) fervescence

c) increase in lymph nodes

d) headache

e) vomiting

e) punctate rash

g) dyspepsia

16. The catarrhal phenomena in a rubella are characterized:

a) small cold, cough, conjunctivitis

b) the plentiful cold, a severe cough expressed by conjunctivitis

17. In peripheral blood in a rubella are noted:

a) anemia

b) leukopenia

c) relative lymphocytosis

d) agranulocytosis

e) emergence of plasmocytes (up to 10-30%)

18. The syndrome of a congenital rubella includes:

a) jaundice

b) deformation of teeth

c) cataract

d) nanocephalia

e) heart disease

e) deafness

g) lymphadenopathy

h) microphthalmia

19. Specific prevention of a rubella includes:

a) it is not carried out

b) administration of live virus vaccine

c) antibiotic treatment

d) administration of gamma-globulin

20.In a parotitis infection are surprised:

a) ferruterous structures

b) tonsils

c) lymph nodes

d) nervous system

21.Damage of sialadens in epidemic parotitis is characterized:

a) increase in the sizes of gland

b) morbidity

c) dermahemia

d) dense consistence

22.Are characteristic of meningitis of a parotitis etiology:

a) fever

b) repeated vomiting

c) headache

d) meningeal signs

e) hemorrhagic rash

23.Cerebrospinal fluid in meningitis of a parotitis etiology:

a) transparent

b) muddy

c) high level of protein

d) high cytosis

e) neutrophylic cytosis

e) lymphocytic cytosis

24.Are characteristic of an orchitis of a parotitis etiology:

a) increase in the sizes of a small egg

b) morbidity of a small egg

c) hydroscheocele

d) irradiation of pains to the inguinal area

e) the complicated urination

25.Clinical laboratory symptoms of pancreatitis of a parotitis etiology:

a) drowsiness

b) abdominal pain

c) increase in amylase in blood serum

d) increase in transaminases

Situational tasks:

Task No. 1

The child of 5 years, came to a hospital for the third day of a disease with complaints to pains when opening a mouth and chewing, high temperature, a headache. The disease began with temperature increase to 39.2□C and a sore throat. Mother noticed a swelling ahead of an auricle on the right. Next day, the called doctor, noted the following: the general moderately severe state, the boy it is pale, subnutrition, sluggish, temperature – 38.5□C. On the right ahead of an auricle the swelling about 8 x 6 cm in size without accurate contours, pasty consistence is noticeable. The swelling extends to a pole at a corner of a mandible and a kzada from an ear lobe. Skin over a swelling is not changed, palpation without serious consequences. At the left in submaxillary area the swelling of 5x6 cm in size extending kpered to a chin is noted. In submaxillary area the symptom of "zybleniye" is defined at the left. Tonsillar lymph nodes did not manage to be propalpirovat. Handles and tonsils are slightly hyperemic. Mucous cheeks dry, is a little edematous. The opening of Stenonov Canal is surrounded with hyperaemia nimbus. ChSS-120 of beats/min, satisfactory filling, rhythm correct. Sonorous cardiac sounds. In lungs there are no pathological changes. Soft, painful stomach. The liver and a spleen are not palpated. A chair without features.

Questions:

1. Make the diagnosis.
2. What complications can arise in this disease?
3. Appoint treatment.

Task No. 2

The child against the background of swelling of both parotid glands had abdominal pain which was localized in epigastric area in left hypochondrium, from time to time have the surrounding character. The child is disturbed by nausea, vomiting, a headache, temperature 38ºC.

Questions:

1. Your expected diagnosis?
2. What methods of inspection need to be carried out for specification of the diagnosis?
3. Appoint treatment.

Task No. 3

In kindergarten among 6 years which are on a quarantine in connection with a disease of parotitis at the child temperature 38.5ºæ appeared, there was a headache, nausea, there was 2-fold vomiting.

Questions:

1. Your expected diagnosis?
2. What methods of inspection need to be carried out for specification of the diagnosis?
3. What actions does the children's doctor need to undertake?

Task No. 4

In a hospital Vitya N. is brought 3 years. Complaints to a loss of consciousness, spasms. From the anamnesis it is known that the child goes in for with, was not with infectious patients in contact. Ached sharply, in the evening temperature rose up to 39 °C, spasms, a loss of consciousness, emergency doctors gave an injection for decrease in t and delivered to the accident ward.

At survey: state heavy, unconscious, t 38.2ºC. On skin of face, a trunk, a hairy part of the head vesicular rash is plentiful. Frequent, superficial breath. In lungs rigid breath, there are no rattles. Cardiac sounds are muffled, clean ChD – 40 in / min., ChSS – 110 in / min. Meningeal symptoms are negative.

Questions:

1. Your preliminary diagnosis.
2. What complication of a disease is revealed at the child?

3. What examination needs to be performed?

4. What mistake is made when collecting epid. anamnesis?

5. What treatment it is necessary to appoint?

Task No. 5

Vitya P. 4 years, got sick sharply, temperature to 38.5ºC rose in the evening, mother of the child noticed an enanthesis of a back, a face, extremities, the doctor was called in the morning.

At survey: serious condition, highly is in a fever t to 39ºC. Dry cough, rough, the "barking" timbre, discharge from a nose of mucous character, a small injection of vessels of scleras, ChD 30 in / min. On skin of a body, a face, extremities, a hairy part of the head plentiful vesicular rash with transparent contents, rash elements up to 0.3 cmin the diameter, are located on the neinfiltrirovanny basis, surrounded with hyperaemia nimbus, a small amount of crusts. Single vesicles are located on mucous a mouth (nice fellows of the sky). Sonorous cardiac sounds, a rhythm correct, ChSS – 100 in 1 min. A soft stomach, @/@, the liver, a spleen are not palpated. A chair, a diuresis without pathology. There are no meningeal symptoms.

Questions:

1. Your diagnosis. Prove it.

2. What complication is revealed at the child.

3. What modern diagnostic methods use for identification of the causative agent of this disease?

4. What treatment it is necessary to appoint?

Class in a subject:
"MENINGOCOCCAL INFECTION AT CHILDREN"

I. Scientific and methodical justification of a subject.

The meningococcal infection belongs to group of neuroinfections – the hardest infectious disease which children and adults are ill. Knowledge of clinic, treatment and prevention of this disease is necessary for the doctors graduating medical faculty as this pathology can meet in their daily activity.

II. Purpose of activity of students on occupation.

The student has to know:

- Etiology, sources, ways of transfer of a disease, pathogenesis of a meningococcal infection;
- Classification of a meningococcal infection;
- Clinic of an acute nasopharyngitis, the differential diagnosis with a SARS;
- Clinic of meningitis, typhus. the diagnosis with meningitis of other etiology;
- Clinic of a meningokoktsemiya, diff. the diagnosis with sepsis of other etiology, a Werlhof's disease, a hemorrhagic vasculitis;
- Laboratory diagnostics in a meningococcal infection;
- Complications: specific early and late period, nonspecific complications;
- Treatment (etiotropic, pathogenetic, emergency treatment) and prevention of a meningococcal infection;

The student has to be able:

- To collect purposefully epid. the anamnesis to select the data confirming a disease;
- To perform objective examination;
- To define a range of necessary laboratory methods of a research;
- To estimate the received results;
- To make the diagnosis, to appoint treatment;
- To render emergency aid at infectious and toxic shock;
- To hold anti-epidemic events in the disease center.

III. Content of training:

1. Meningococcal infection (etiology, epidemiology, pathogenesis, clinic, diagnostics, treatment).
2. Clinical forms of a meningococcal infection.
3. Complications in a meningococcal infection.
4. Prevention in the center, work with contact.

IV. Educational material security.

1. Visual aids: tables, schemes, multimedia presentations, videos.
2. Educational medical documentation (case histories, laboratory researches).

3. Technical means of training.
4. Literature.

V. The list of the recommended literature.

1. Children's diseases: the textbook / under the editorship of A.A. Baranov. – M.: GEOTAR-media, 2009. – 1008 pages.
2. Pediatrics: The textbook for medical schools. Under the editorship of N.P. Shabalov. – SPb: SpetsLit, 2006. – 895 pages.
3. Propaedeutics of children's diseases / to N.A. Geppa. – M.: GEOTAR-media, 2009. – 464 pages.
4. N.P. Shabalov. Neonatology: Manual. – M.: MEDpress-inform, 2009.
5. E.K. Tsybulkin. The menacing states at children. – M.: GEOTAR-media, 2007. – 226 pages.
6. V.F. Uchaykin, N.I. Nisevich, O.V. Shamsheva. Infectious diseases at children. – M.: GEOTAR-media, 2010. – 688 pages.
7. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Technique of a research of the child. The study guide for students. – Vladikavkaz, 2011. – 51 pages.
8. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Scheme of a case history. The study guide for students. – Vladikavkaz, 2011. – 38 pages.
9. Lectures on pediatrics.
10. Methodical instructions for out-of-class work of students of the 5th course of medical faculty on discipline "Pediatrics".

VI. List of questions for check of initial level of knowledge:

1. Call a source and ways of transfer of a meningococcal infection.
2. Give characteristic of an infestant.
3. Call the main clinical forms of a meningococcal infection.
4. Call methods of laboratory diagnosis of a meningococcal infection.

VII. List of questions for check of final level of knowledge:

1. List the main clinical symptoms of a meningokoktsemiya.
2. What diseases have similar clinical symptoms with a meningokoktsemiya?

3. Call the main clinical symptoms of acute purulent meningitis of a meningococcal etiology.
4. Call equivalents of meningeal symptoms at children of the 1st year of life.
5. List changes of liquor in a spotted fever.
6. Carry out the differential diagnosis of a spotted fever with meningitis of other etiology.
7. Call clinical signs of a nasopharyngitis, the differential diagnosis with a SARS.
8. Call complications of a meningococcal infection.
9. Specify conditions of hospitalization of patients with a meningococcal infection.
10. Call methods of treatment of a meningococcal nasopharyngitis.
11. Features of antibacterial therapy in a meningococcal infection.
12. Call the principles of emergency treatment of a meningococcal infection.
13. Indications for an extract of convalescents in children's collective.
14. Call preventive actions in the center of a meningococcal infection.

Information block.

The meningococcal infection belongs to group of droplet infections. The acute disease proceeding in the form of a nasopharyngitis, meningitis and/or meningococcal sepsis (meningococcemia).

Etiology.

Neisseria meningitides are located in cerebrospinal fluid mainly intracellularly in pairs in the form of coffee beans. On Gram are painted negatively. Distinguish 7 serotypes of the activator to which the type-specific immunity (And, B, C, D, X, Y, Z), etc. develops, but they meet seldom. Meningokokk of a serogroup of A. Meningokokki have the greatest epidemiological value produce strong endotoxin. At a temperature of 50C meningokokk °perish in 5 minutes, at 100C °– in 30 seconds. Under the influence of ultraviolet rays the activators perish almost instantly, are very sensitive to all disinfectants.

Epidemiology.

Source of an infection are patients and carriers. The greatest danger is constituted by patients in an acute period of a disease. In the epidemiological relation the large role is

played by patients with a meningococcal nasopharyngitis and also the healthy carriers who are found ten times more often than patients.

The infection is transmitted in the airborne way. The possibility of transfer through objects of use is improbable. The susceptibility is small – 0.5%. At the caught people the "healthy" carriage is formed more often. Children under 5 years are most susceptible, about 70% of all cases of a meningococcal infection are the share of this age, 40-50% from them get on children of the first year of life. Perhaps transplacental infection a meningococcal infection, newborns are ill seldom.

Children of early age get sick with a meningococcal infection mainly that is connected with lack of sanitary skills at them and also density in children's collectives.

Clinic.

The incubation interval fluctuates from 2 to 10 days (the thicket is 3-5 days old). The clinical picture of a disease depends on a form of a meningococcal infection.

Classification of a meningococcal infection

- *the localized forms* (meningococcal carriage and acute nasopharyngitis);
- *generalized forms* (meningokoktsemiya; a spotted fever, an encephalomeningitis and the mixed meningokoktsemiya option with purulent meningitis);
- *rare forms* (meningococcal endocarditis, meningococcal arthritis, meningococcal pneumonia, meningococcal iridocyclitis).

The most frequent clinical form of a disease is the acute nasopharyngitis.

Meningococcal nasopharyngitis. The disease at 50% of patients usually begins with emergence of subfebrile temperature, in some cases temperature increases up to 38-38.5C°, at 30-40% of patients the body temperature remains normal. The main symptoms of a disease – a headache in parietofrontal area, irritation in a throat and pain when swallowing, is frequent tussiculation, congestion of a nose, cold with poor mucopurulent discharges. The slackness, an indisposition, a loss of appetite, a bad dream are noted, certain patients can have a dizziness, vomiting, a skin hyperesthesia, pallor of integuments, an unsharp injection of vessels of scleras and hyperaemia of a conjunctiva. The disease proceeds easily, body temperature is normalized for the 2-3rd day, is more rare for the 5-7th day. Changes in a nasopharynx keep up to 10 days. Clinical diagnosis of a

meningococcal nasopharyngitis is very difficult, usually sick reveal only in the infection center.

Meningokoktsemiya develops sharply or suddenly. Patients can specify not only day, but also hour when they got sick. Precursory symptom is increase in temperature which in the 1st day reaches 39-40C°, has intermittent or constant character. Patients complain of a fever, weakness, a headache, quite often a dorsodynia, extremities, small appetite. From the 1st day of a disease the skin pale, is noted a hyperesthesia, tachycardia, short wind are characteristic. At the end of the 1st – the beginning of the 2nd day appears the main clinical symptom of a disease – rash. Elements of rash can be rozeolezny, papular, however hemorrhagic rash in the form of irregular shape of asterisks of various size is most characteristic. Quite often the rash is punctate or in the form of large superficial necroses. In the most hard cases the gangrene of finger-tips of hands, feet, auricles develops.

Most often rash is observed on extremities, buttocks, hips, a trunk, a face and centuries. Deep and extensive hemorrhages can nekrotizirovatsya. Further sites of necroses are torn away, formed the deep, badly healing ulcers.

Quite often at a meningokoktsemiya joints are surprised. Range of these defeats is wide – from arthralgias to purulent arthritises. Usually joints of fingers of hands are involved in process, large joints are slightly more rare. Patients complain of joint pains, sometimes there is their swelling. Skin in joints is hyperemic, movements are limited because of sharp morbidity.

In some cases at a meningokoktsemiya the defeat of a choroid of eyes meets. At patients the uveitis, an iridocyclitis or a panophthalmia develops. Usually process is unilateral. Development of pneumonia, arthritises, myocarditis, endocarditis is possible.

In peripheral blood at a meningokoktsemiya the high leukocytosis, neutrophylic shift to young and myelocytes, an aneosinophilia and increase in SOE are noted. In most cases meningococcal sepsis proceeds in combination with meningitis.

Spotted fever. The disease begins sharply with temperature increase to 39-40C°, the expressed fever. Children of advanced age complain of a severe headache which usually has diffusion character. The headache on is pronounced so much that children groan, clutch hands at the head. Children are uneasy, scream, they interrupt a sleep. The headache

amplifies at turn of the head, at the movement, strong light and sound irritants. Backbone pains are possible, especially when pressing on nervous trunks and roots of nerves. The hyperesthesia can be carried to the leading symptoms of purulent meningitis.

Important symptom in a spotted fever – spasms. Usually they are kloniko-tonic, quite often develop with 1-godnya diseases, is especially frequent at children of early age. The nonsense, excitement are possible.

Meningeal symptoms are noted on the 2-3rd, day, but can be distinct and from the 1st day of a disease. Most often the stiff neck, positive Kernig's signs and an upper symptom of Brudzinsky are defined. At children of the first year of life the meningeal symptoms often are negative. At them with big constancy the symptom of "suspension" of Le Sage, a tremor of hands, protrusion of a big fontanel and also the zaprokidyvany heads are observed. The child accepts a characteristic meningeal pose: lies on one side, the head is thrown back, legs are bent in knee and hip joints and tightened to a stomach.

Tendon jerks are more often raised, but in heavy intoxication they can be absent, the clonus of feet, Babinsky's symptom, a hypomyotonia quite often is defined. Perhaps quickly taking place damage of cranial nerves. Emergence of focal symptomatology indicates hypostasis and brain swelling.

In a spotted fever with big constancy the red dermographism, herpetic rashes on lips are noted. Pulse is speeded up, cardiac sounds are muffled, is lowered by the ABP. In hard cases breath frequent, superficial, at auscultation – rigid breath. At children of early age in the first days of a disease ponosa can be noted that complicates diagnostics. The dryness of language, sometimes thirst are characteristic. The liver and a spleen are increased. Owing to intoxication the insignificant albuminuria, a cylindruria, a microhematuria can develop. In peripheral blood – a leukocytosis, neutrophylic shift, an aneosinophilia, increase in SOE.

Changes from cerebrospinal fluid are of great importance for diagnostics. In the first day of a disease it can be transparent, but it quickly becomes muddy, purulent owing to high content of neutrophils. The amount of sugar and chlorides at the height of a disease decreases.

Complications.

Acute insufficiency of adrenal glands, infectious and toxic shock, swelling and wet brain.

Diagnosis.

the lumbar puncture and results of laboratory researches are crucial. In practical work the bacteriological research of cerebrospinal fluid and blood smears (thick drop) and also results of crops of liquor and blood on nutrient mediums from the subsequent bacterioscopy are most important.

From serological methods the greatest sensitivity RPGA with the erythrocytes loaded with specific antigen has, they allow to catch the insignificant maintenance of specific antibodies (RPGA) and the minimum concentration in blood of patients of meningococcal toxin (VIEF).

Differential diagnostics.

Unlike a meningokoktsemiya in measles the expressed catarrhal phenomena (conjunctivitis, a sclerite, cough) are noted, are characteristic an enantema, spots of Belskogo-Filatogo-Koplika, rash has spotty and papular character and pours out etapno. In blood a leukopenia, a lymphocytosis, SOE within norm.

Scarlet fever is distinguished by the flaring pharynx, a necrotic tonsillitis, a punctate rash and not such serious general condition, as at a meningokoktsemiya.

At an iyersinioza the rash has no star-shaped hemorrhagic character, and reminds rashes in scarlet fever or a rubella rather, is located mainly around joints, on a face, brushes and feet (symptoms of a hood, gloves, socks); also white dermographism, systemacity of defeats and rather mild symptoms of intoxication are characteristic.

Unlike a meningokoktsemiya in hemorrhagic vasculites the rash is symmetrized strictly, more often on extensors, buttocks, in ankle joints. The disease often proceeds in the form of the separate attacks.

Treatment.

All patients with a meningococcal infection or with suspicion of it are subject to immediate hospitalization in specialized department or to the diagnostic box.

At suspicion on a generalized form of a meningococcal infection carry urgently out penicillin therapy by massive doses. Appoint usually potassium salt of benzylpenicillin at the rate of 200,000 - 300,000 PIECES/kg of body weight a day. To children aged up to 3-6 months. Penicillin is entered on 300,000 - 400,000 PIECES/kg a day. Intervals between introductions should not exceed 4 h, children of the first 3 months have lives – 3 h as at this age faster removal of penicillin from the spinal channel is noted. Need introduction of high doses of penicillin is dictated by bad penetration of penicillin through a blood-brain barrier.

For control of treatment carry out a lumbar puncture. If at the same time in cerebrospinal fluid ***the cytosis does not exceed 100 cells in 1 mkl. and it has lymphocytic character***, treatment by penicillin stop. If the pleocytosis remains neutrophylic, it is recommended to continue administration of penicillin in a former dose during 2-3 days.

At intolerance of penicillin appoint levomycetinum sodium succinate in a dose of 50-100 mg/kg of body weight a day. The daily dose is entered into 3-4 receptions. Treatment continues 6-8 days.

Along with causal treatment in a meningococcal infection it is necessary to hold a complex of the pathogenetic events directed to fight against toxicosis and normalization of exchange processes. For this purpose patients receive optimum amount of liquid (plentiful drink, in/in introduction of a reopoliglyukin, Ringera solution, 5% of solution of glucose, plasmas, albumine, etc.). Liquid is entered by drop infusion at the rate of 50-200 mg/kg of body weight a day depending on age, by weights of a state, electrolytic balance and renal function. Administration of donor immunoglobulin is shown.

At very severe forms of a meningokoktsemiya proceeding with a syndrome of acute adrenal insufficiency, treatment begin with intravenous jet input of the fluid (reopoliglyukin, 10% glucose solution) before emergence of pulse. Add a hydrocortisone (20-30 mg) to the first portion of perfused liquid. The daily dose of Prednisolonum can be brought to 5-10 mg/kg, a hydrocortisone – to 20-30 kg/kg. After emergence of pulse it is necessary to pass to drop input of the fluid. Intravenously also enter plasma or albumine, cocarboxylase, ATP, strophanthin or Korglykonum, ascorbic acid. Duration of infusional therapy is defined by a condition of the patient. After considerable improvement of a state

the amount of the entered liquid is reduced considerably, and corticosteroid drugs quickly cancel. The general duration of steroid therapy should not exceed 3-5 days.

Treatment by glucocorticoids is quite often supplemented with intramuscular administration of Desoxycorticosteronacetatum (DOKSA) on 2 mg/kg in 4 receptions. For fight against acidosis enter 4.5% hydrosodium carbonate solution, and for fight against a hypoxia, appoint oxygenotherapy. Correction of a hypopotassemia is carried out by intravenous injection of drugs of potassium.

At the earliest stages of superacute meningococcal sepsis the prescribing of heparin for the purpose of prevention of disseminate intravascular coagulation pathogenetic is justified. Heparin appoint in a dose 5000 - 20000 PIECES intravenously (depending on age) before development of a sharp hypofibrinogenemia.

In a renal failure the administration of Mannitolum, Euphyllinum and other diuretics is shown. In the absence of effect carry out a hemodialysis.

At development of a syndrome of acute brain swelling or its threat it is necessary to carry out vigorous dehydrational therapy. For this purpose enter Mannitolum at the rate of 1-3 gr. dry matter on 1 kg. body weights of the patient in day. In the absence of damage of kidneys it is possible to enter urea in a dose 1-1.5 gr/kg.

Patients with a meningococcal nasopharyngitis do not demand complex treatment. Usually treat with antibiotics or sulfanamide drugs in the standard doses within 5 days. To children of advanced age appoint irrigations of a pharynx warm solution of Furacilin, hydrosodium carbonate. For prevention of dryness and crusts in a nose dig in peach or liquid paraffin.

Prevention

are among: earlier and full identification of sources of an infection, sanitation of bacillicarriers, isolation and treatment of patients. Patients with manifest forms of a meningococcal infection are immediately hospitalized in specialized departments. The extract from a hospital is possible at clinical recovery and obtaining two negative takes of bacteriological crops from a nasopharynx. Had it can be allowed in collective in 10 days after an extract.

In the infection center within 10 days make medical observation of contact persons. It consists in survey of a nasopharynx, integuments and thermometry 2 times a day,

repeated bacteriological inspection (not less than 2 times during observation). At identification of suspicious symptoms of surveyed isolate and sanify. Patients with symptoms of an acute and chronic nasopharyngitis are subject to the corresponding therapy even at negative takes of a bacteriological research. Chemoprophylaxis in the centers of an infection is not carried out. Reception of new faces in collectives where there were cases of a meningococcal infection, should be stopped for 10 days, considering of day of identification of the last diseased.

Tasks for independent work:

1. Solve situational problems and tasks of test control.
2. Examine the patient with neuroinfection, using the scheme below, describe the deviations revealed by you in the state of health.

Scheme of inspection of the patient.

When collecting the anamnesis pay attention on:

- epidemiological data in family, children's collective;
- the beginning and dynamics of a disease before arrival of the child in a hospital;
- the treatment spent at home.

At an objective research to pay attention on:

- general condition of the child;
- presence of symptoms of toxicosis;
- existence of catarrhal symptoms from upper airways;
- presence of rash, its character and localization;
- existence of meningeal symptoms;
- presence of intestinal dysfunction;
- disturbance of active mobility of extremities;
- disturbance of breath, swallowing, focal symptomatology (defeat of kernels of cranial nerves);
- rate of pulse and breath;
- size ABP;
- these palpations, percussions and auscultations of bodies of a thorax;

- condition of abdominal organs.

At interpretation of datas of laboratory:

- complete blood count test (maintenance of erythrocytes, Nv, leukocytes, leukocytic formula, SOE);
- analysis of cerebrospinal fluid;
- bacteriological research of slime from a nose and a pharynx.

Situational tasks.

Task No. 1

The child of 5 years received out-patient treatment on the site concerning a nasopharyngitis. For the 3rd day from the beginning of a disease the headache, vomiting, temperature increase to 39ºC, hemorrhagic rash on skin of a star-shaped form developed. The patient is brought by the paramedic to central district hospital without assistance.

In the accident ward joined marbling the skins cold to an extremity, clammy sweat, threadlike pulse, pulse 160 in 1 min., the ABP of 80/25 mm Hg, abdominal pain, an oliguria.

Questions:

1. Your diagnosis.
2. Make the plan of additional inspection.
3. Medical tactics.

Test control

1. Rash at a meningokoktsemiya:
   a) anulyarny
   b) hemorrhagic star-shaped
   c) spotty and papular
   d) petekhialny
2. Prevention of a meningococcal infection is carried out:
   a) live vaccine
   b) inactivated vaccine
   c) polysaccharide vaccine
   d) vaccination is not carried out

3. In a meningococcal infection in peripheral blood is defined:

a) lymphocytosis

b) neutrocytosis

c) monocytosis

4. Ways of transfer of a meningococcal infection:

a) airborne

b) contact

c) fecal and oral

d) food

5. In a spotted fever in cerebrospinal fluid a cytosis:

a) lymphocytic

b) neutrophylic

c) mixed

6. At contact with the patient with a meningococcal infection in family it is carried out:

a) hospitalization of children of this family

b) double bacteriological inspection of family members

c) single bacteriological inspection of family members

7. In a spotted fever it is possible to cancel an antibiotic in a cytosis in liquor no more:

a) 1000 cells in 1 mkl

b) 100 cells in 1 mkl

c) 50 cells in 1 mkl

d) 250 cells in 1 mkl

8. At a meningokoktsemiya in liquor the cytosis is defined:

a) neutrophylic

b) lymphocytic

c) normal

9. Development **is not characteristic** of a meningokoktsemiya:

a) sinoviit

b) uveitis

c) lymphadenitis

d) pyelitis

10. **Is not** the reason of a lethal outcome at a meningokoktsemiya:
    a) cerebral hemorrhage
    b) throat stenosis
    c) infectious and toxic shock
11. Clinical symptoms of a spotted fever are all listed below **except:**
    a) acute onset
    b) vomiting
    c) meningeal symptoms
    d) paresis of extremities
    e) fever

Class in a subject:
"POLIOMYELITIS AND POLIOMIYELITOPODOBNYE IZABOLEVANIYA"

I. Scientific and methodical justification of a subject.

Poliomyelitis belongs to group of neuroinfections – the hardest infectious disease which children are ill mainly. Knowledge of features of clinic, treatment and prevention of this disease is necessary for the doctors graduating medical faculty as this pathology can meet in their daily activity.

II. Purpose of activity of students on occupation.

The student has to know:

- Etiology, sources, ways of transfer of a disease, pathogenesis of poliomyelitis;
- Classification of poliomyelitis;
- Clinical manifestations of poliomyelitis;
- Laboratory diagnostics in poliomyelitis;
- Treatment (etiotropic, pathogenetic) and prevention of a meningococcal infection;

The student has to be able:

- To collect purposefully epid. the anamnesis to select the data confirming a disease;
- To perform objective examination;
- To define a range of necessary laboratory methods of a research;
- To estimate the received results;
- To make the diagnosis, to appoint treatment;

- To hold anti-epidemic events in the disease center.

III. Content of training:

1. Poliomyelitis (etiology, epidemiology, pathogenesis, clinic, diagnostics, treatment).
2. Prevention in the center, work with contact.

IV. Educational material security.

1. Visual aids: tables, schemes, multimedia presentations, videos.
2. Educational medical documentation (case histories, laboratory researches).
3. Technical means of training.
4. Literature.

V. The list of the recommended literature.

1. Children's diseases: the textbook / under the editorship of A.A. Baranov. – M.: GEOTAR-media, 2009. – 1008 pages.
2. Pediatrics: The textbook for medical schools. Under the editorship of N.P. Shabalov. – SPb: SpetsLit, 2006. – 895 pages.
3. Propaedeutics of children's diseases / to N.A. Geppa. – M.: GEOTAR-media, 2009. – 464 pages.
4. N.P. Shabalov. Neonatology: Manual. – M.: MEDpress-inform, 2009.
5. E.K. Tsybulkin. The menacing states at children. – M.: GEOTAR-media, 2007. – 226 pages.
6. V.F. Uchaykin, N.I. Nisevich, O.V. Shamsheva. Infectious diseases at children. – M.: GEOTAR-media, 2010. – 688 pages.
7. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Technique of a research of the child. The study guide for students. – Vladikavkaz, 2011. – 51 pages.
8. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Scheme of a case history. The study guide for students. – Vladikavkaz, 2011. – 38 pages.
9. Lectures on pediatrics.
10. Methodical instructions for out-of-class work of students of the 5th course of medical faculty on discipline "Pediatrics".

VI. List of questions for check of initial level of knowledge:

1. Call a source and ways of transfer of the causative agent of poliomyelitis.
2. Give characteristic of an infestant.
3. Call clinical manifestations of poliomyelitis.
4. Call methods of laboratory diagnosis of poliomyelitis.

VII. List of questions for check of final level of knowledge:

1. List the main clinical symptoms of poliomyelitis.
2. Carry out the differential diagnosis of poliomyelitis with poliomiyelitopodobny diseases.
3. Make the plan of inspection of children with suspicion of poliomyelitis and specify the expected results.
4. Specify the principles of treatment of children with poliomyelitis
5. Call preventive actions in the poliomyelitis center.

Information block.

Poliomyelitis (polios - gray, myelos - a spinal cord) is the acute viral disease which is characterized by damage of nervous system (mainly gray matter of a spinal cord) and also inflammatory changes of a mucous membrane of intestines and nasopharynx.

The causative agent of poliomyelitis (poliovirus hominis) belongs to group of picornaviruses, to family of enteroviruses where also Koksaki- and ESNO-viruses enter. Distinguish three serotypes of a virus (I, II, III). Most often 1 type meets. The virus sizes - 8-12 nanometers, contain RNA. It is steady in external environment (in water remains up to 100 days, in excrements - up to 6 months), well transfers freezing, drying. Does not collapse digestive juices and antibiotics. It is cultivated on cellular cultures, possesses cytopathic action. Perishes when boiling, as a result of ultra-violet radiation and disinfectants.

The only **source of an infection of poliomyelitis** - the person, especially sick with the easy and erased disease forms. The number of the last considerably exceeds number of patients with clinically apparent forms of poliomyelitis. Children up to 10 years get sick mainly (60-80% of diseases are the share of children under 4 years). The disease is more often observed in aestivo-autumnal months (at most in August-October). The fecal and

oral mechanism of transfer is characteristic, also transmission of infection is possible in the airborne way. The virus of poliomyelitis gets to external environment together with excrements of patients; it contains also in nasopharynx slime approximately in 3 days prior to temperature increase and within 3-7 days after an onset of the illness. In recent years in the majority of the countries including in Russia, the incidence sharply decreased in connection with broad use of effective immunization by live vaccine.

Entrance infection atriums is the mucous membrane of a nasopharynx or intestines. During an incubation interval the virus breeds in lymphoid formation of a throat and intestines, then gets into blood and reaches neurons. The most significant morphological changes are found in neurons of front horns of a spinal cord. Neurons are exposed dystrophic - to necrotic changes, break up and perish. With smaller constancy cells of a brain trunk, subcrustal kernels of a cerebellum and still to a lesser extent - cells of motive areas of a cerebral cortex and back horns of a spinal cord are exposed to similar, but less significant changes. Hyperaemia and cellular infiltration of a soft meninx is often noted. Death of 1/4-1/3 neurons in thickenings of a spinal cord leads to development of paresis. Full paralyzes arise at death more than 1/3 cellular structures.

After the termination of the sharp phenomena **the died cells are substituted with gliozny fabric** from the outcome in scarring. The sizes of a spinal cord (especially front horns) decrease: in hemilesion the asymmetry is noted. In muscles which innervation suffered the atrophy develops. Changes of internals insignificant - in the first week the picture of interstitial myocarditis is noted. The postponed disease leaves behind durable, type-specific immunity.

The incubation interval proceeds on average 5-12 days (fluctuations from 2 to 35 days are possible). Distinguish not paralytic and paralytic forms of poliomyelitis.

Not paralytic form proceeds more often in the form of a so-called "small disease" (abortive or visceral form) which is shown by short-term fever, catarral (cough, cold, a sore throat) and the dispepsichesky phenomena (nausea, vomiting, a liquid chair). All clinical manifestations disappear usually within several days. Other option of not paralytic form is easily proceeding serous meningitis.

In development of paralytic poliomyelitis allocate 4 stages:

1. preparalytic

2. paralytic
3. recovery
4. stage of the residual phenomena

The disease begins sharply with substantial increase of body temperature. During the first 3 days the headache, an indisposition, cold, pharyngitis is noted, gastrointestinal disorders (vomiting, a liquid chair or a constipation) are possible. Then after 2-4 days of an apireksiya the secondary feverish wave with sharp deterioration in the general state appears. At some patients the period of an apireksiya can be absent. Body temperature increases up to 39-40 °C, the headache amplifies, the profound hyperesthesia, confusion of consciousness and the meningeal phenomena develop a dorsodynia and extremities. In liquor — from 10 to 200 lymphocytes in 1 mkl. Decrease in animal force and tendon jerks, convulsive starts, twitching of separate muscles, a tremor of extremities, morbidity at a tension of peripheral nerves can be observed, vegetative disorders (a hyperhidrosis, red spots on skin, "goose-pimples" and other phenomena). The preparalytic stage lasts 3-5 days.

Appearance of paralyzes usually makes a suddenness impression. At most of patients they develop within several hours. Paralyzes sluggish (peripheral) with lowering of a tone of muscles, restriction or lack of active movements, with partial or full reaction of degeneration and lack of tendon jerks. Mainly myshtsia of extremities, especially proximal departments are surprised. More often legs are surprised. Sometimes there comes paralysis of muscles of a trunk and neck. With development of paralyzes there are spontaneous muscle pains; there can be pelvic disorders. Disturbances of sensitivity are not observed. In a paralytic stage the cellular and proteinaceous dissociation in liquor is replaced with proteinaceous and cellular.

Depending on primary localization of damages of nervous system the paralytic poliomyelitis is divided into several forms:

- spinal (sluggish paralyzes of extremities, trunks, necks, diaphragms);
- bulbar (disturbance of swallowing, speech, breath, warm activity);
- pontinny (defeat of a kernel of a facial nerve with paresis of mimic muscles);
- encephalitic (all-brain phenomena and focal brain damage);
- mixed (the multiple centers of defeat).

The most severe defeats are **paralysis of respiratory muscles and a diaphragm**, injury of a medulla which lead to heavy disorders of breath and blood circulation. More often patients perish from breath disturbance. At survived a paralytic stage proceeds of several days to 1-2 weeks.

Restoration of functions of the paralyzed muscles goes in the beginning rapidly, and then slows down. The recovery period can proceed from several months to 1-3 years. The stage of the residual phenomena (residual) is characterized by persistent sluggish paralyzes, an atrophy of muscles, contractures and deformations of extremities and trunks.

Pneumonia, atelectases of lungs, interstitial myocarditis; sometimes acute gastrectasia, heavy gastro intestinal disorders with bleeding, ulcers, a perforation, Ilheus develop.

At typical manifestations at the patient of a paralytic form its recognition does not represent difficulties. The acute feverish onset, fast development of sluggish paralyzes, their asymmetry, primary defeat of proximal departments of extremities, peculiar dynamics of changes of liquor are characteristic of poliomyelitis. Considerable difficulties are presented by recognition of poliomyelitis in an early preparalytic stage and its not paralytic forms. The diagnosis is established on the basis of clinical symptomatology (meningeal symptoms, weakness of separate muscular groups, weakening of tendon jerks), epidemiological prerequisites (presence of poliomyelitis in the patient's environment, summertime) and data of a laboratory research (virus discharge on the cultures of fabrics, RSK and precipitation test with specific antigen in pair serums).

In a preparalytic stage there can be effective an administration of immunoglobulin (on 0.3-0.5 ml/kg of mass of the patient). In a sharp phase apply antiedematous, sedative, soothing, antigipoksant, group B vitamins, antibiotics (at bacterial complications). For prevention of contractures it is necessary to stack the patient on a rigid mattress without pillow, legs have to be extended, feet are fixed in normal situation by the tire. At increase of paralysis of respiratory muscles of the patient transfer to artificial ventilation of the lungs. In the recovery period widely use antikholinesterazny drugs (prozerin), nootropa, adaptogens, Dibazolum, glyutaminovy acid, perform massage, physiotherapy exercises, physical therapy, sanatorium treatment.

The forecast at heavy bulbar and rachioplegias very serious. At a favorable course at had the disability because of persistent atrophic paralyzes is formed.

Patients are isolated surely. An extract of convalescents is made after disappearance of the sharp phenomena, but not earlier than 40 days from the date of a disease. **Prevention is performed by planned immunization**.

Tasks for independent work:

1. Solve situational problems and tasks of test control.
2. Examine the patient with neuroinfection, using the scheme below, describe the deviations revealed by you in the state of health.

Scheme of inspection of the patient.

When collecting the anamnesis pay attention on:

- epidemiological data in family, children's collective;
- the beginning and dynamics of a disease before arrival of the child in a hospital;
- the treatment spent at home.

At an objective research to pay attention on:

- general condition of the child;
- presence of symptoms of toxicosis;
- existence of catarrhal symptoms from upper airways;
- existence of meningeal symptoms;
- presence of intestinal dysfunction;
- disturbance of active mobility of extremities;
- disturbance of breath, swallowing, focal symptomatology (defeat of kernels of cranial nerves);

At interpretation of datas of laboratory:

- complete blood count test (maintenance of erythrocytes, NV, leukocytes, leukocytic formula, SOE);
- analysis of cerebrospinal fluid;
- bacteriological research of slime from a nose and a pharynx.

Test control

1. For virologic diagnosis of poliomyelitis use material

1) blood
2) washouts from a stomatopharynx
3) I wet
4) excrements
5) liquor

2. At treatment of the patient with poliomyelitis during an acute period do not use

1) high bed rest
2) diuretic
3) anesthetics
4) antikholinesterazny means
5) glucocorticosteroids

3. Dispensary observation after the postponed severe spinal form of paralytic poliomyelitis continues

1) 3 months
2) 6 months
3) 1 year
4) 3 years
5) before full orthopedic correction

4. Observation of contact children up to 5 years in the center of acute sluggish paresis continues

1) 3 days
2) 10 days
3) 20 days
4) 54 days
5) 60 days

5. In the poliomyelitis center the single vaccination against poliomyelitis is carried out

1) all contact
2) to children till 1 year
3) to children up to 3 years
4) to children up to 5 years
5) to children up to 7 years

6. For the 6th day of a SARS the child of 1.5 years ceased to go. In the right leg there are no movements, in left – are kept. There is hypotonia, lack of tendon knee jerks, the sensitivity is kept. what diagnosis is most probable

1) encephalitis
2) Giyen's syndrome – Barret
3) poliomyelitis

4) infectious myelitis
5) polyradiculoneuritis

7. Next day after AKDS inoculation + poliomyelitis the child began to limp. On the party in oil of an injection, movements in a leg are limited, tendon jerks and sensitivity are reduced. What diagnosis is probable

1) vaktsinassotsiirovanny poliomyelitis
2) Giyen's syndrome – Barret
3) vaccine-challenged encephalitis
4) traumatic neuropathy
5) encephalitis

8. General symptom of a pontinny form of poliomyelitis and neuritis of a facial nerve

1) face pains
2) dacryagogue
3) change of taste
4) smoothness of a nasolabial fold
5) ptosis

9. General symptom of a spinal form of acute paralytic poliomyelitis and infectious myelitis

1) sensitivity disorder
2) trophic disturbances
3) sluggish paralysis 78
4) pelvic disturbances
5) spastic paralysis

10. The most frequent clinical form of acute paralytic poliomyelitis

1) meningeal
2) spinal
3) pontinny
4) bulbar
5) combined

11. For poliomyelitis eradication it is used

1) sanitation of virus carriers
2) administration of immunoglobulin
3) interferon use
4) planned immunization
5) antibacterial therapy

12. Where the defeat center at a syndrome of a giyen is localized – bar

1) front horns of a spinal cord
2) back horns of a spinal cord
3) white matter of a spinal cord
4) nerve fibrils
5) brain substance

13. Of what acute sluggish paresis the proteinaceous and cellular dissociation during an acute period of a disease is characteristic

1) poliomyelitis
2) traumatic neuropathy
3) Giyen's syndrome – Bar
4) infectious myelitis
5) polyradiculoneuritis

14. Specify the wrong term of immunization against poliomyelitis

1) vaccination in 3, 4, 5, 6 months
2) revaccination in 18 months
3) revaccination in 20 months
4) revaccination in 14 years
5) revaccination in 24 years

15. In what terms after contact with imparted by live poliomyelitic vaccine we expect development of vaktsinassotsiirovanny poliomyelitis in contact

1) from 1 to 14 day
2) from 6 to 60 day 79
3) from 6 to 30 day
4) from 30 to 60 day
5) from 1 to 30 days

16. In what terms patronage imparted by live poliomyelitic vaccine is carried out

1) from 1 to 15 day
2) from 4 to 30 day
3) from 6 to 60 day
4) from 15 to 30 day
5) from 1 to 30 day

17. In orphanage the child of 5 years without data on inoculations against poliomyelitis is made out. As you will impart it

1) not to impart
2) to make 1 vaccination
3) to do 3 vaccination with intervals of 1.5 months, then to revaktsinirovat in 14 years
4) to make only 3 vaccination in 1.5 months
5) to impart in dekretirovanny terms

18. In acute sluggish paralyzes does not treat a "hot" case

1) OVP at children up to 5 years which are not imparted against poliomyelitis
2) OVP at the children having less than 3 inoculations
3) OVP at the refugees, Roma who arrived from zones of military action
4) OVP at the persons which arrived in the last 1.5 months from Chechnya, Ingushetia and the countries endemic on poliomyelitis
5) Giyen's syndrome – Bar

19. The bulbar form of poliomyelitis is characterized

1) swallowing disturbance
2) disturbance of phonation
3) strengthening, sometimes to a clonus, reflexes from the lower extremity
4) pharyngeal type of disturbance of breath
5) sometimes respiratory arrhythmia

20. For a paralytic form of poliomyelitis of disorder of sensitivity

1) are characteristic
2) are not characteristic

Class in a subject:
"DIPHTHERIA AND ITS DIFFERENTIAL DIAGNOSIS"

I. Scientific and methodical justification of a subject.

Despite decrease in incidence of diphtheria, this infection still occur among the children's population, is more rare among adults.

In recent years diphtheria considerably "matured". At the same time its diagnostics quite often is late since doctors often do not think of a possibility of a disease of adults of children's infections and are not familiar with some features of a clinical course of the disease.

In this regard to the doctor of any specialty it is necessary not only to diagnose correctly this infectious disease, but also to carry out necessary anti-epidemic and treatment.

II. Purpose of activity of students on occupation:

The student has to know:

- epidemiological features of diphtheria;
- infection sources in this disease;

- ways of infection;
- susceptibility;
- incidence and lethality;
- pathogenesis of diphtheria;
- clinical picture of diphtheria and also differential diagnostics;
- diphtheria complications;
- methods of laboratory diagnostics;
- basic principles of treatment, prevention;
- features of a course of diphtheria at adults.

The student has to be able:

- to collect epid. anamnesis;
- to perform objective examination;
- to appoint special laboratory researches, to estimate their results;
- to hold anti-epidemic events in the center (isolation, observation, prevention of a disease at contact).

III. Content of training:

1. Diphtheria (etiology, pathogenesis, epidemiology, clinic, diagnostics, diff. diagnostics, treatment).
2. Features of a course of diphtheria at adults.
3. Complications in diphtheria, their treatment.
4. Preventive actions in the diphtheria center.

IV. Educational material security.

1. Visual aids: tables, schemes, multimedia presentations, videos.
2. Educational medical documentation (case histories, laboratory researches).
3. Technical means of training.
4. Literature.

V. The list of the recommended literature.

1. Children's diseases: the textbook / under the editorship of A.A. Baranov. – M.: GEOTAR-media, 2009. – 1008 pages.

2. Pediatrics: The textbook for medical schools. Under the editorship of N.P. Shabalov. – SPb: SpetsLit, 2006. – 895 pages.
3. Propaedeutics of children's diseases / to N.A. Geppa. – M.: GEOTAR-media, 2009. – 464 pages.
4. N.P. Shabalov. Neonatology: Manual. – M.: MEDpress-inform, 2009.
5. E.K. Tsybulkin. The menacing states at children. – M.: GEOTAR-media, 2007. – 226 pages.
6. V.F. Uchaykin, N.I. Nisevich, O.V. Shamsheva. Infectious diseases at children. – M.: GEOTAR-media, 2010. – 688 pages.
7. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Technique of a research of the child. The study guide for students. – Vladikavkaz, 2011. – 51 pages.
8. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Scheme of a case history. The study guide for students. – Vladikavkaz, 2011. – 38 pages.
9. Lectures on pediatrics.
10. Methodical instructions for out-of-class work of students of the 5th course of medical faculty on discipline "Pediatrics".

VI. List of questions for check of initial level of knowledge:

1. General patterns of epidemiology of infectious diseases.
2. Main kliniko-pathogenetic mechanisms of infectious diseases.
3. Clinical forms of infectious diseases. Complications. Immunity.
4. Specific diagnosis of infectious diseases.
5. Principles of therapy of infectious diseases (specific and nonspecific).
6. Clinic and treatment of infectious toxicosis.

VII. List of questions for check of final level of knowledge:

1. Etiology, pathogenesis of diphtheria.
2. Call the main clinical forms of diphtheria.
3. List the main clinical diagnostic criteria in diphtheria?
4. What examination does the patient need to perform?
5. With what diseases it is necessary to differentiate diphtheria?
6. Complications in diphtheria, their treatment.

7. Call the principles of pathogenetic therapy of diphtheria.
8. What features does diphtheria at adults have?
9. List preventive actions in the diphtheria center.

Information block.

DIPHTHERIA

– the acute infectious disease caused by Corynebacteria diphtheria, characterized by inflammation of mucous membranes of an upper and average part of respiratory tract, other bodies with formation of fibrinous films and the general intoxication.

Epidemiology.

Infection source – sick diphtheria, the carrier of a toxicogenic strain of a diphtheritic stick in a nasopharynx, on skin. Ways of transmission of infection – mainly airborne, the contact and household way is possible. The post-inoculative anti-toxic immunity does not prevent infection, however the disease proceeds benign.

Etiology and pathogenesis.

Corynebacterium diphtheriae – a gram-positive diphtheritic stick of Leffler (BL).

Entrance gate – mucous membranes of a pharynx, a nose, upper airways, are more rare than eyes and genitals and also the damaged integuments. On the place of entrance gate the activator breeds and emits exotoxin. Necrosis of fabrics with formation of a fibrinous film is a consequence of local influence of exotoxin. As a result of all-toxic action the heart, peripheral nervous system, adrenal glands, kidneys are surprised.

Principles of classification.

On localization: to a thicket – drinks, throats; more rare – skins, an ear, eyes and genitals.

On weight: non-toxic, subtoxic, toxic (I, II and III degrees), hemorrhagic, hypertoxical.

In a course: uncomplicated and complicated (asphyxia, pneumonia, infectious and toxic shock, toxic hypostasis, paresis and paralyzes of a soft palate, a diphtheritic toxic nephrosis, myocarditis).

Clinic.

Incubation interval up to 12 days (the thicket is 2-7 days old). The syndrome of the general intoxication is characterized by temperature rise of a body from subfebrile figures

to 40 °C depending on disease severity, a general malaise, a headache, weakness, pain when swallowing. The catarrhal syndrome is shown by rhinitis, pharyngitis, tonsillitis, laryngitis with an inspiratory asthma. The general feature of a course of the above-stated states is emergence in the place of localization in the first days and the significant development by 2-3rd day of a disease of characteristic diphtheritic films. In the first days of a film can be thin and easily removed. Then plaques become grayish-white color, smooth, brilliant. They tower over a cover mucosal surface, densely are soldered to it, are removed hardly, after removal there is a bleeding Surface on which the new film is formed. The removed film sinks in water, is not pounded between slide plates. The catarrhal syndrome can be followed by regional lymphadenitis and hypostasis of cervical cellulose in toxic diphtheria. The prevalence of hypostasis depends on severity of a disease (the I degree of hypostasis – to the middle of a neck, the II degree of hypostasis – to clavicles, the III degree of hypostasis – below clavicles). Damage of a throat is characterized by clinic of a diphtheritic croup which can lead to asphyxia. At imparted the disease develops in the form of the easy localized forms.

Diagnostics.

Bacteriological research (a smear from a pharynx on BL). Discharge of a toxicogenic strain of a diphtheritic stick.

Serological methods of a research detection of antimicrobic bodies (RPGA) and definition of a caption of antitoxin in dynamics in 7 days from the beginning of a disease.

Treatment and prevention.

The patient is hospitalized in an infectious hospital. Success of treatment is defined by timely administration of antidiphtherial serum. The dose of drug is defined by severity of a disease and its form. For prevention of an acute anaphylaxis previously enter across Bezredko vnutrikozhno 0.1 ml. divorced 1:100 serums, in 30 min. – 0.1 ml. not divorced serum under skin. In the absence of reaction in 1 hour other quantity is intramusculary entered.

Antibacterial therapy is carried out during 2 weeks by penicillin (100000-150000 Pieces/kg/days) or macroleads: erythromycin (50 mg/kg/days), klaritromitsiny (15 mg/kg/days). To carriers of a toxicogenic strain of a diphtheritic stick carry out antibacterial therapy by the same drugs during 1 week.

Recovery occurs not earlier than the 14th day. At the same time there have to be no all clinical symptoms of a disease, triple negative crops on a diphtheritic stick from a nose and a pharynx are necessary. Observation of a convalescent is made within 3-6 months.

Anti-epidemic actions.

Isolation of the patient. On contact impose a quarantine for 7 days. Observation of contact includes LOR-survey, thermometry, daily survey of mucous membranes and a pharynx, smears from a pharynx and a nose on a diphtheria stick. Vaccinated enter diphtheritic antitoxin once of 0.5 ml in oil. Bacillicarriers are hospitalized. Carry out topical treatment. Final disinfection is carried out by 1% by chloroamine solution.

Immunization.

Vaccination is carried out from 3-month age it is triple with an interval of 45 days a diphtherial anatoxin of AKDS (AKDS-M, ADS-M). AKDS revaccination in 18 months. ADS revaccination in 7 and 14 years.

Task for independent work:

3. Solve situational problems and tasks of test control.
4. Examine the patient and describe the revealed changes in state of his health.

Scheme of inspection of the patient.

When collecting the anamnesis pay attention on:

- Epid. anamnesis: disease source, contacts, incubation interval, visit of child care facilities).
- Inoculations.
- The background diseases complicating a course of infectious process.
- Presence of perinatal encephalopathy.
- Presence of exudative diathesis, allergic diseases or reactions, intestinal dysbacteriosis.

At an objective research to pay attention on:

- Weight of a state, temperature reaction, neurologic status, meningeal signs, defeat peripheral and central nervous system, severity of infectious toxicosis.
- State mucous mouth, conjunctiva (color, dieback, its localization, color of language), condition of a pharynx.

- Condition of integuments, nature of rash (description, emergence time, localization), peeling (character, localization).
- Condition of hypodermic cellulose of a neck.
- Palpation of lymph nodes (size, consistence, morbidity, mobility).
- Condition of a cardiovascular system (ABP, vascular insufficiency, "infectious heart", myocardites).
- Sizes of a liver and spleen.
- Existence of the dysuric phenomena, color of urine, daily urine.
- Survey of other bodies and systems.

At interpretation of datas of laboratory:

- Complete blood count test (leukocytosis, leukocytic formula, SOE)
- Analysis of urine.
- Bacteriological research smears from a pharynx and a nose).
- Serological blood test in dynamics (increase of an antiserum capacity).
- ECG, FKG, EhoKG.

Situational tasks

Task No. 1

Vitya S. got sick 6 years sharply: there was a weakness, in unusual time went to bed. By the evening temperature to 38.8ºæ increased, began to complain of a sore throat when swallowing. By the morning the state worsened: there was a slackness, the sore throat amplified. The called doctor at survey found in a pharynx on the internal surface of tonsils grayish-whitish imposings in the form of strips and islands. Plaques were located on convex parts of tonsils, slightly acting over a mucosal surface, in attempt to remove them, blood appeared. Dense plaques, in the form of a pellicle. Hyperaemia in a pharynx moderate, submaxillary lymph nodes are slightly sensitive at a palpation. Cardiac sounds are muffled, pulse 108 in min. Vesicular breath sound. Soft, painless stomach. The liver edge is palpated. A chair, urination without features.

The boy attends kindergarten, was not with infectious patients in contact.

Questions:

1. Your expected diagnosis?

2. Tactics of the district doctor?

3. Main treatment?

4. Necessary actions in kindergarten?

Task No. 2

The girl of 5 years came to hospital in critical condition. Ached 3 days ago when the insignificant sore throat when swallowing developed. The called doctor made the diagnosis "tonsillitis", appointed rinsings of a throat Furacilin, irrigation by Inhalyptum. A condition of the patient there was no swelling in submaxillary area on both sides which by third day extended to a neck and went down below clavicles.

At receipt: the girl is very sluggish, pale, neck hypostasis from two parties to 2 edges in front, in a pharynx the continuous dirty-gray plaques occupying tonsils, a uvula, a soft and hard palate (almost to the teeth). Cardiac sounds deaf, ChSS – 150 in 1 min.

Questions:

1. Formulate the diagnosis.

2. Draw up the plan of inspection.

3. Make the treatment plan of the patient.

4. List the most frequent complications of a disease.

Test control.

1. It is reasonable to bacillicarriers of toxicogenic korinebakteriya of diphtheria to appoint:
    a. anti-toxic antidiphtherial serum
    b. ADS-anatoxin
    c. antibiotic widely spectrum of action
2. The diphtheritic croup is characterized:
    a. sudden emergence of symptoms of a stenosis
    b. gradual development of clinical symptoms
3. When calculating a dose of anti-toxic serum, to the entered patient with diphtheria, consider:
    a. mass of the child
    b. age of the child

c. clinical form of a disease

4. In pathogenesis of diphtheria the leading role belongs:
    a. a) bacteremia
    b. b) toksinemiya
5. At the localized stomatopharynx diphtheria intoxication:
    a. expressed
    b. weak
6. At suspicion of diphtheria the doctor of policlinic is obliged:
    a. a) to enter to the patient antidiphtherial serum
    b. b) to perform the emergency hospitalization
    c. c) to submit the emergency notice to SES
7. At the localized stomatopharynx diphtheria form:
    a. temperature over 40º C
    b. sharp pain when swallowing
    c. pharynx hyperaemia
    d. the plaques which are not going beyond tonsils
    e. neck cellulose hypostasis
8. Typical complications of toxic diphtheria is:
    a. pneumonia
    b. myocarditis
    c. polyradiculoneuritis
    d. glomerulonephritis
    e. meningitis
9. Vaccination against diphtheria of early age is carried out:
    a. AKDS – vaccine
    b. ADS – vaccine
    c. ADS-M – vaccine
10. Clinical manifestations of diphtheritic myocarditis:
    a. abdominal pain
    b. vomiting
    c. spasms

d. cantering rhythm
e. dullness of cardiac sounds

Class in a subject:
"Acute viral hepatitis"

I. Scientific and methodical justification of a subject.

Now highly current is a problem of a viral hepatitis. Increase in incidence among the children's and teenage contingent, especially is noted by the hepatitis which is transmitted parenterally, differing in a heavy course, high in synchronization percent with development of cirrhosis and hepatocellular carcinoma. In this regard knowledge of clinic, methods of treatment and prevention of a viral hepatitis is necessary for doctors of any specialization.

II. Purpose of activity of students on occupation.

The student has to know:

- etiology, sources, ways of transfer of a viral hepatitis;
- pathogenesis of a disease;
- classification of a viral hepatitis;
- clinic of an acute viral hepatitis, the differential diagnosis with other diseases proceeding with a hepatomegalia, jaundice;
- clinic of an acute liver failure;
- laboratory diagnostics in an acute and chronic viral hepatitis;
- general principles of treatment of a viral hepatitis;
- emergency treatment in a hepatic coma;
- preventive actions in a viral hepatitis;
- terms of an extract from a hospital and the principles of dispensary observation for patients;

The student has to be able:

- to collect purposefully epid. the anamnesis to select the data confirming a disease;
- to perform objective examination;
- to define a range of necessary laboratory methods of a research;
- to estimate the received results;

- to make the diagnosis, to appoint treatment;
- to render emergency aid in a hepatic coma;
- to hold anti-epidemic events in the disease center.

III. Content of training:

1. Classification of a viral hepatitis at children.
2. Clinical features of a course of an acute viral hepatitis at children of a younger age group.
3. Complications and forecasts of a viral hepatitis.
4. Prevention in the center, work with contact.

IV. Educational material security.

1. Visual aids: tables, schemes, multimedia presentations, videos.
2. Educational medical documentation (case histories, laboratory researches).
3. Technical means of training.
4. Literature.

V. The list of the recommended literature.

1. Children's diseases: the textbook / under the editorship of A.A. Baranov. – M.: GEOTAR-media, 2009. – 1008 pages.
2. Pediatrics: The textbook for medical schools. Under the editorship of N.P. Shabalov. – SPb: SpetsLit, 2006. – 895 pages.
3. Propaedeutics of children's diseases / to N.A. Geppa. – M.: GEOTAR-media, 2009. – 464 pages.
4. N.P. Shabalov. Neonatology: Manual. – M.: MEDpress-inform, 2009.
5. E.K. Tsybulkin. The menacing states at children. – M.: GEOTAR-media, 2007. – 226 pages.
6. V.F. Uchaykin, N.I. Nisevich, O.V. Shamsheva. Infectious diseases at children. – M.: GEOTAR-media, 2010. – 688 pages.
7. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Technique of a research of the child. The study guide for students. – Vladikavkaz, 2011. – 51 pages.

8. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Scheme of a case history. The study guide for students. – Vladikavkaz, 2011. – 38 pages.
9. Lectures on pediatrics.
10. Methodical instructions for out-of-class work of students of the 5th course of medical faculty on discipline "Pediatrics".

VI. List of questions for check of initial level of knowledge:

1. Call a source and ways of transfer in an acute viral hepatitis.
2. Call the main forms of a viral hepatitis.
3. Give characteristic of infestants.
4. Give epidemiological characteristic of a viral hepatitis.
5. Call methods of laboratory diagnosis of a viral hepatitis.

VII. List of questions for check of final level of knowledge:

1. Etiology, main pathogenetic syndromes of a viral hepatitis And.
2. Classification of a viral hepatitis And.
3. Clinical picture of typiforms of a viral hepatitis And.
4. Atypical forms of a viral hepatitis And.
5. Complications and outcomes of a viral hepatitis And.
6. Laboratory diagnosis of a viral hepatitis And.
7. Treatment and prevention of a viral hepatitis And.
8. Etiology, pathogenesis of a viral hepatitis of Century.
9. Classification of a viral hepatitis of Century.
10. Clinical picture of typiforms of a viral hepatitis of Century.
11. Complications and outcomes of a viral hepatitis of Century.
12. Features of a viral hepatitis In at children of early age.
13. Laboratory diagnosis of a viral hepatitis of Century.
14. Prevention of a viral hepatitis of Century.
15. Viral hepatitis With (an etiology, epidemiology, clinic, diagnostics)
16. Differential diagnosis of a viral hepatitis.
17. Principles of treatment of a viral hepatitis.

Information block.

ACUTE VIRAL HEPATITIS AND (VH)

– the acute cyclic enteroviral infection which is characterized by primary defeat of a gepatobiliarny system with development of all-toxic, dispepsichesky and hepatolienal syndromes, an abnormal liver function.

Epidemiology.

The incidence of children 140-180 on 100,000, has epidemic character. Index of contageousness high. Children of the first half of the year of life are ill seldom owing to oroimmunity.

Etiology and pathogenesis.

The RNA-containing activator the enterovirus steady in external environment. Ways of transfer – fecal and oral and contact and household. A source – the patient since the end of an incubation interval, in a prodromal and initial stage of a heat of a disease.

Pathogenesis.

The main syndromes – a cytolysis syndrome, a syndrome of hepatocellular insufficiency, a cholestasia syndrome, a mesenchymal and inflammatory syndrome, a syndrome of immunosuppressive influence, a syndrome of dyskinesia of biliary tract and a digestive tract.

Classification of VGA.

On type:

1. Typical.
2. Atypical:

   - anicteric
   - erased
   - subclinical (latent)
   - asymptomatic (inapparantny).

On weight:

1. Easy form
2. Medium-weight form
3. Heavy to headlights

Criteria of weight:

- expressiveness of clinical symptoms;
- expressiveness of biochemical indicators

In a course:

A. On duration:

1. Sharp (up to 3 months)
2. Long (up to 6 months)

B. On character:

1. Smooth.
2. Rough

- with kliniko-biochemical aggravations;
- with complications;
- with stratification of consecutive infection;
- with exacerbation of chronic diseases.

Clinic.

The incubation interval is 7-50 days.

The preicteric period of 5-7 days – is characterized by prevalence of a toxic syndrome in grippopodobny, dispepsichesky and astenovegetativny options. Nausea, vomiting, increase temperature to 38-39ºC, pains in right hypochondrium and paraumbilical area are characteristic. At the end of the period – darkening of urine and decolouration a calla, increase in a liver by 2-5 cmand its consolidation. In the period of a heat there is an ikterichnost of scleras, icteric coloring of skin and mucous membranes, intoxication decreases, body temperature is normalized, the hepatomegalia, the decoloured chair and dark color of urine remains. In a koprogramma – soaps and crystals of fatty acids.

The icteric period proceeds up to 2-3 weeks. At children of early and preschool age usually observe an anicteric course of hepatitis.

In the period of ***the convalescence*** proceeding from 1 to 6-12 months astenovegetativny disturbances are gradually liquidated, functional hepatic trials are restored. At 5% of patients observe a long course of HECTARE.

Outcome of HECTARE usually favorable.

Diagnostics.

Increase in ALT in 10-40 and more times, increase of a caption of IgM - anti-HAV in a prodromal stage or the beginning of the period of a heat of HECTARE and IgG of anti-HAV in the convalescence period is characteristic.

Treatment and prevention.

The patient is hospitalized in an infectious hospital. Treatment is limited in most cases to a bed rest in the disease heat, a sparing diet (table No. 5), symptomatic means (hepatotrophic means, holekinetik). In hard cases the therapy is necessary disintoxication, sometimes corticosteroid and anti-virus (viferon).

After an extract from a hospital make dispensary observation. Survey of the patient with determination of activity of ALT – in 1 and 3 months. The child after HECTARE at permanent normalization of clinical laboratory indicators is struck off the dispensary register in 6 months. Convalescents of HECTARE have to keep to a sparing diet, limit physical activities, continue intake of vitamins. At the remaining gipertransaminazemiya appoint gepatoprotektor, at the dispeptic phenomena – enzymes (festal, mezim-forte, kreon), a probiotics. Carry out treatment of dyskinesia of biliary tract.

Anti-epidemic actions. In group of child care facility (in a class) after isolation of the patient with HECTARE carry out final disinfection with use of chlorine-containing disinfecting solutions. Establish a quarantine for 35 days from the dissociation moment with patients during whom 2-h-multiply define ALT. In the first 2 weeks after contact once enter specific immunoglobulin of 0.02 ml/kg of body weight. For active immunization in territories with high incidence of HECTARE and on epid. to indications use inactivated mono - ("HAVRIX", "GEP-A-in-VAK") and divaccines A/V.

ACUTE VIRAL HEPATITIS IN (VH)

– acute form of the disease of a liver caused by DNA a virus.

Epidemiology.

Meets everywhere. Incidence of children 1: 100,000. A way of transfer – parenteral at a hemotransfusion, at injections kontaminirovannny needles, syringes, through nipples, toothbrushes, razors, basts and also transplacental and at sexual contact. Susceptibility of children of 100%, children of the 1st year of life are most sensitive. The seasonality is absent. Immunity at convalescents lifelong.

Etiology and pathogenesis.

The activator – the GV virus has: HBsAg surface antigen, nuclear HBcAg antigen and it is close with it the connected HBeAg. Viruses of hepatitis B have extremely high stability in external environment, but perish during the autoclaving, sterilization by dry heat, at long boiling, when processing by chlorine-containing disinfectants. Replication of virions happens in hepatocytes and also in cells of marrow, blood, lymph nodes, spleens. In a liver the cytolysis, the mesenchymal and inflammatory and cholestatic phenomena develops.

Classification of VGV.

On type:

1. Typical.
2. Atypical:

- anicteric
- erased
- subclinical (latent)
- asymptomatic (inapparantny)

On weight:

1. Easy form
2. Medium-weight form
3. Severe form
4. Malignant (fulminantny) form

Criteria of weight:

- expressiveness of clinical symptoms;
- expressiveness of biochemical indicators

In a course:

A. On duration:

1. Sharp (up to 3 months)
2. Long (up to 6 months)
3. Chronic (over 6 months)

B. On character:

1. Smooth.
2. Rough

- with complications;
- with stratification of consecutive infection;
- with exacerbation of chronic diseases.

Clinic.

Incubation interval – of 6 weeks up to 6 months.

The preicteric period lasts on average from 4 to 10 days, up to 3-4 weeks more rare. Astenovegetativny, dispepsichesky, artralgichesky syndromes and their combinations are characteristic of it. At the end of the preicteric period the liver and a spleen increase, there are signs of a cholestasia – naggers, dark urine and akholichny kcal. At a part of patients (10%) note a dieback (usually urtikarny), symptoms of a vasculitis, sometimes – a papular acrodermatitis (Dzhanotti-Krosti's syndrome).

The icteric period – 2-6 weeks. Jaundice accrues, intoxication and dispepsichesky disorders at 1/3 patients – naggers of skin amplifies. In blood the activity of enzymes of indicators of a cytolysis increases (ALT and nuclear heating plant, γ-glutamiltranspeptidaza, lactate dehydrogenases). Signs of insufficiency of hepatocytes are characteristic (decrease in albumine, cholesterol, factors of a prothrombin complex, pro-accelerin and increase in bilirubin). Are typical mesenchymal and inflammatory reaction (increase in levels of γ-globulins, the CEC, IgM and IgG, sedimentary reactions, increase of an antiserum capacity to hepatic antigens) and emergence of markers of a cholestatic syndrome (increase in activity of alkaline phosphatase, leucineaminopeptidase, 5 nucleotidases, gamma glyutamiltranspeptidazy, increase in cholesterol, increase in direct bilirubin).

In the period of ***a convalescence*** (2-12 months) the disease symptoms gradually disappear, but is long the astenovegetativny syndrome, feeling of discomfort in right hypochondrium remain. At children of the 1st year and at teenage addicts the VGV malignant (fulminantny) form meets acute onset, the high fever expressed by intoxication, dyspepsia, hemorrhages, neurologic symptomatology, a considerable splenomegaly and jaundice. The most serious complication of severe forms of VGV is the acute liver failure developing at diffusion damage of a liver at 4-10% of patients.

Diagnostics.

Verify VGV detection of HBeAg, anti-HBcIgM and also identification at the

polymerase chain reaction (PCR) of DNA of the GV virus.

Treatment.

VGV carry out in infectious department. The basis of treatment is formed by the guarding mode, clinical nutrition (diet No. 5a, 5) and nonspecific medicinal therapy (polyvitamins, microelements, holekinetik, at a cholestasia – drugs urso-, heno- and taurodezoksikholevy acids). At average and severe forms of hepatitis apply desintoxication (enterosorbents, hemodilution, a plasma exchange and gemosorbtsino), inhibitors of proteases, glucocorticoids. At progressive course from the first days of VGV a course not less than 3 months appoint a combination of acyclic nucleotides (lamivudin, kriksivan, etc. also recombinant α-2-interferon (viferon, etc.) or inductors of interferon (tsikloferon, etc.).

Criteria of recovery – disappearance of symptoms of intoxication and jaundice, normalization of color of stool and urine, the sizes of a liver, spleen, normalization in blood serum of bilirubin and activity of transaminases (ALT, nuclear heating plant).

After an extract from a hospital carry out out-patient aftercare. Convalescents of VGV are observed by the infectiologist. Define nuclear heating plant, bilirubin, GV virus markers in 1, 3, 6, 9, 12 months after an extract. Appoint vitamins, mineral waters. Medicamentous therapy is carried out depending on the nature of the residual phenomena: gepatoprotektor, choleretics and holekinetik, interferona (continue the course begun in a hospital), etc.

Anti-epidemic actions include adequate processing of medical tools and the diagnostic invasive equipment, inspection of donors and blood preparations on the GV virus and also promotion of safe sex. Active immunization against GV is included in the National calendar of inoculations. It is carried out it is triple according to the scheme: in the first 24 hours, in 3 months and 6 months. Specific prevention to the children who were born from HBsAg-positive mothers is carried out the 4th multiply. The immunity remains more than 5 years.

OTHER ACUTE VIRAL HEPATITIS

The prevalence is definitely not verified. Index of contageousness high. The virus of the hepatitis E (HE) is transmitted fecal and oral and contact and household ways. Viruses C, D, F, G are transmitted in the parenteral way, transplatsentarno, during

childbirth and, perhaps, at sexual contact. GS most often meets at the addicts using drugs parenterally. The Hepatitis D (HD) meets only at the persons infected with GV.

Clinical picture.

GS at most of children proceeds oligosymptomatic. Jaundice develops at 15-40% of patients. Persistention of an infection develops at 75-85%, chronic hepatitis – at 60-70%, cirrhosis – at 10-20% of the persons who transferred GS. Gepatokartsinoma at children's age develops seldom.

GD proceeds in the form of sharp coinfection or superinfection at sick GV. When progressing a disease fulminantny hepatitis with an acute liver failure quite often develops, in other cases GD leads to chronic hepatitis with quickly formed cirrhosis. Lethality at superinfection – 5-20%.

Treatment.

Treatment is carried out in an infectious hospital. The basis of treatment is formed by the pathogenetic therapy similar to VGA and VGV. At GS and GD apply a combination of a ribavirin and recombinant and-2-interferonov a course not less than 3 months.

Anti-epidemic actions are similar carried out at VGA and VGV.

Task for independent preparation:

1. Solve situational problems and test tasks.
2. Examine the patient with a viral hepatitis, using the scheme below, describe the revealed changes in the state of health of your patient in a workbook.

Scheme of inspection of the patient.

When collecting the anamnesis pay attention on:

- epidemiological data in family, children's collective;
- existence of hemotransfusions, injections at treatment of the patient;
- the beginning and dynamics of a disease before arrival of the child in a hospital;
- the treatment spent at home;
- features of the vaccinal calendar of the child.

At an objective research to pay attention on:

- general condition of the child;

- presence of symptoms of toxicosis;
- color of integuments and visible mucous;
- existence of vascular "asterisks", "hepatic palms", expressiveness of venous network on an anterior abdominal wall;
- increase in the sizes of a liver and spleen;
- increase in the sizes of regional lymph nodes;
- existence of a hemorrhagic syndrome (petekhialny rashes, nasal, gingival bleedings);
- presence of intestinal dysfunction, color calla, color of urine;
- rate of pulse and breath;
- size ABP.

At interpretation of datas of laboratory:

- complete blood count test (maintenance of erythrocytes, Hb, leukocytes, leukocytic formula, SOE);
- in biochemical analysis of blood increase in content of bilirubin and change of a ratio of its fractions, the increased content of hepatocellular enzymes;
- in the analysis of urine – emergence of bilirubin in urine;
- serological research on specific markers of a viral hepatitis;
- Ultrasonography of internals: condition of a liver, gall bladder, spleen.

Situational tasks.

Task No. 1

The boy of 4 years, got sick sharply: from temperature rise of a body to 38 °C, complained of an abdominal pain, there was repeated vomiting, an indisposition. The diagnosis of the district doctor - a SARS. For the 4th day, urine darkened. For the 5th day of a disease noticed yellowness of scleras and skin. The child was hospitalized. In kindergarten, in the next group, for the last 3 weeks, cases of children with similar symptomatology are celebrated.

At receipt in a hospital: satisfactory health, it is active, appetite satisfactory, there are no complaints. Scleras and integuments moderately ikterichna. A mucous membrane of a stomatopharynx damp with icteric coloring. In lungs vesicular breath sound, there are

no rattles. Rhythmical, sonorous cardiac sounds. A soft, painful stomach at a palpation in right hypochondrium and in epigastriums. The liver acts from hypochondrium on 2.5 cm, plotnovaty consistence, painful at a palpation. The spleen is not palpated. Dark urine. In the next 4 days the obsolescence of jaundice was noted, urine became light.

Complete blood count test: Ayr - 4.0Õ1012/l, Nv - 130 g/l, Leyk - 5.4Õ109/l, p.b. - 2%, with / I am 49%, e - 1%, l - 40%, m - 8%; SOE - 10 mm/hour.

Biochemical analysis of blood: bilirubin the general - 80 μmol/l, conjugated - 50 μmol/l, ALT - 1100 Pieces/l, nuclear heating plant - 830 Pieces/l, thymol turbidity test - 22 pieces.

Virus markers: HBsAg (-), anti-HCV (-), anti-HAV IgM (+).

General analysis of urine: color is brown, relative density – 1017, protein does not, glucose does not, leukocytes – 2-3 in p/z, erythrocytes – 1-2 in p/z, bilious pigments (+++).

Task:

1. Make the clinical diagnosis.
2. What changes in a biochemical and serological research confirm the diagnosis?
3. Interpret data of complete blood and urine count test.
4. Carry out the differential diagnosis.
5. Appoint treatment.
6. Hold anti-epidemic events in kindergarten.

Task No. 2

The girl of 8 years, came to clinic from orphanage with complaints to slackness, reduced appetite, an abdominal pain.

At receipt: the ikterichnost of scleras was defined, an easy ikterichnost of skin, the pharynx is quiet. In lungs and heart without deviations. The soft stomach moderately painful at a palpation, without accurate localization. The plotnovaty liver, was palpated on 1.5-2.0 see belowa costal arch. The spleen is not increased. Color of urine within five days was saturated, color a calla did not change.

Complete blood count test: Hb - 130 g/l, Ayr - 3.82Õ1012/l, C. the item - 0.9, Leyk - 5.0Õ109/l, p.b. - 3%, with / I am 53%, e - 2%, l - 40%, m - 2%; SOE - 10 mm/hour.

Biochemical analysis of blood: level of the general bilirubin – 72 μmol/l,

conjugated – 60 μmol/l, activity of ALT - 1230 Pieces/l, nuclear heating plant - 85 Pieces/l.

In urine: urobilin and bilious pigments are found.

Serological virus markers: anti-HCV (+), HCV RNA (+), HBsAg (-), anti-Hbcor IgM (-), anti-HAV IgM (-).

Task:

1. Make the clinical diagnosis.
2. Carry out the differential diagnosis.
3. What changes in biochemical and serological blood tests confirm the diagnosis?
4. Appoint treatment.
5. Expected source and way of infection.
6. Anti-epidemic actions in children's home.
7. Call possible options of an outcome of this disease.

Test control.

1. Changes of coloring of urine in a viral hepatitis it is caused by emergence in urine:
   A) urobilin
   B) the conjugated bilirubin
   C) biliverdin
2. The serological marker confirming hepatitis A etiology during an acute period of a disease is:
   A) anti-– HAV IgG
   B) anti-– HBc IgM
   C) anti-– HBe
   D) anti-– HAV IgM
3. Transfer of a virus of hepatitis B is carried out the next ways:
   A) airborne
   B) sexual
   C) food
   D) spray
   E) hemotransfusionic
4. At a subclinical form of hepatitis A are noted:

A) increase in a liver

B) weak ikterichnost of scleras and skin

C) increase in activity of ALT in blood serum

D) bilirubinemia

E) identification in blood serum anti-– HAV IgM

E) identification in urine of bilious pigments

5. Characteristic clinical laboratory indicators of typical hepatitis A in the period of a heat are:

A) fever

B) jaundice

C) hepatomegalia

D) increase in sublimate test

E) increase in an indicator of ALT

E) muscle and joints pains

G) diarrhea

6. To treatment of chronic hepatitis it is applied now:

A) recombinant interferon

B) normal human immunoglobulin

C) vaccine against hepatitis B

7. Clinical manifestations of cirrhosis are:

A) vascular asterisks

B) palmarny erythema

C) expanded venous network in a stomach

D) convulsive syndrome

8. The response to vaccine injection against hepatitis B in an organism happens development:

A) Anti-HAV IgG

B) Anti-HBs

B) Anti-HBcore (sums.)

D) Anti-HBe

9. Biochemical indicators of typical hepatitis A are:

A) increase in level of the general bilirubin in blood serum at the expense of the conjugated bilirubin

B) increase in level of the general bilirubin in blood serum at the expense of not conjugated bilirubin

C) rise in level of serumal transaminases in blood serum

D) increase in indicators of thymol turbidity test

E) increase in level of creatinine in blood serum

10.Of an anicteric form of an acute viral hepatitis it is characteristic:

A) the increased level of serumal transaminases

B) normal level of serumal transaminases

11.Vaccine is applied to prevention of hepatitis A now:

A) live

B) plasma

C) recombinant

D) inactivated

12.In a viral hepatitis With it is often noted:

A) fulminantny form

B) process synchronization

C) recovery

13.In a viral hepatitis And health of the patient from the moment of appearance of jaundice:

A) worsens

B) improves

14.In a chronic viral hepatitis judge efficiency of antiviral therapy on:

A) normalization of indicators of sublimate test

B) normalization of level of serumal transaminases

C) to disappearance of markers of replication of a virus from blood serum

D) to lowering of the level hyperbilirubinemia

15. A contraindication to vaccination against hepatitis B is:

A) chronic hepatitis C

B) hyper thermal reaction to vaccine AKDS

C) sharp phase of an infectious disease

16. On the first year of life children are ill more often:

A) hepatitis A

B) hepatitis B

C) hepatitis C

17. Main way of transfer of hepatitis B to children of the first year of life:

A) breast milk

B) airborne

C) parenteral

D) fecal and oral

18. Seromarkers of the period of a heat of an acute hepatitis In are:

A) anti-HBc IgM

B) anti-HBe

C) anti-HBsAg

D) HBeAg

19. The most informative indicators in diagnostics of a malignant form of a viral hepatitis are:

A) decrease in the prothrombin ratio

B) increase in the prothrombin ratio

C) decrease in level a beta – lipoproteids

D) increase in thymol turbidity test

E) increase in level of not conjugated bilirubin

20. Vaccinal prevention of hepatitis B protects the patient from hepatitis D:

A) truly

B) incorrectly

Class in a subject:
"ACUTE DISORDERS OF FOOD AND DIGESTION"

I. Scientific and methodical justification of a subject.

Acute intestinal infections (acute disorders of food and digestion) are the most widespread diseases of children of early age. In view of similarity of clinical

symptomatology of dysentery, a salmonellosis, a staphylococcal colienteritis and an intestinal koliinfektion the diagnosis of intestinal infections is quite often difficult. At the same time, at untimely treatment the disease can proceed in a severe form from the failure. Knowledge of this pathology is necessary for the doctors graduating medical faculty as part of them will work as infectiologists and resuscitators.

II. Purpose of activity of students on occupation:

The student has to know:

- etiology of the acute intestinal infections (AII): dysentery, salmonellosis, intestinal koliinfektion, staphylococcal coloenteritis;
- questions of epidemiology of OKA;
- classification of OKA;
- clinical features of OKA;
- clinic and pathogenesis of toxicoses at children;
- types of dehydration and their clinical features;
- questions of laboratory diagnostics of OKA;
- basic principles of therapy and prevention of OKA;
- indications to an extract from a hospital of patients of OKA.

The student has to be able:

- to purposefully collect and analyze the anamnesis at patients from OKA, paying attention to an epidemic situation in family and children's collective;
- to conduct an objective research of the child, patient of OKA;
- to estimate a condition of food of the child;
- in the presence of toxicosis and dehydration to define their degree and a look, to estimate the nature of a chair;
- to analyze datas of laboratory;
- to make the diagnosis according to the existing classification;
- to make the plan of medical and preventive actions in acute intestinal infections;
- to write prescriptions on the main medicines applied to treatment of OKA.

III. Content of training:

1. Epidemiology of OKA: dysentery, salmonellosis, staphylococcal coloenterites,

intestinal koliinfektion.

2. Call the main clinical symptoms of above-mentioned acute intestinal infections.
3. Call classifications of OKA.
4. Call and characterize forms of chronic dysentery.
5. Call methods of laboratory diagnostics of OKA.
6. List the basic principles of therapy of OKA.
7. Types of toxicoses of OKA and their clinical characteristic.
8. Dehydration options at OKA and their clinical characteristic.
9. List urgent actions in toxicoses and dehydration.
10. Call preventive actions at OKA.

IV. Educational material security.

1. Visual aids: tables, schemes, multimedia presentations, videos.
2. Educational medical documentation (case histories, laboratory researches).
3. Technical means of training.
4. Literature.

V. The list of the recommended literature.

1. Children's diseases: the textbook / under the editorship of A.A. Baranov. – M.: GEOTAR-media, 2009. – 1008 pages.
2. Pediatrics: The textbook for medical schools. Under the editorship of N.P. Shabalov. – SPb: SpetsLit, 2006. – 895 pages.
3. Propaedeutics of children's diseases / to N.A. Geppa. – M.: GEOTAR-media, 2009. – 464 pages.
4. N.P. Shabalov. Neonatology: Manual. – M.: MEDpress-inform, 2009.
5. E.K. Tsybulkin. The menacing states at children. – M.: GEOTAR-media, 2007. – 226 pages.
6. V.F. Uchaykin, N.I. Nisevich, O.V. Shamsheva. Infectious diseases at children. – M.: GEOTAR-media, 2010. – 688 pages.
7. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Technique of a research of the child. The study guide for students. – Vladikavkaz, 2011. – 51 pages.

8. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Scheme of a case history. The study guide for students. – Vladikavkaz, 2011. – 38 pages.
9. Lectures on pediatrics.
10. Methodical instructions for out-of-class work of students of the 5th course of medical faculty on discipline "Pediatrics".

VI. List of questions for check of initial level of knowledge:

1. Call ways of infection with dysentery, a salmonellosis if - an infection.
2. Give characteristic of the causative agent of dysentery, salmonellosis, an esherikhioz.
3. Call the main symptoms of dysentery, salmonellosis, an esherikhioz.
4. List the main features of introduction salt metabolism at children.

VII. List of questions for check of final level of knowledge:

1. Call incubation interval duration in intestinal infections.
2. During what period the seasonal rise in incidence of acute intestinal infections is noted?
3. In what acute intestinal infection the infection from animals is possible?
4. Call features of a course of a shigellosis at children of the first year of life.
5. Call the main links of pathogenesis of a toxic and diarrheal syndrome at a shigellosis.
6. Describe the nature of a chair in dysentery, salmonellosis, an esherikhioza.
7. Call the main clinical manifestations of a salmonellosis at children.
8. List the main treatment in acute intestinal infections at children.
9. Call features of dietary food of children in an acute period of intestinal infections.
10. Call treatment in neurotoxicosis at the children sick with acute intestinal infections.
11. What treatment does the patient need to appoint with eksikozy? How the necessary volume of liquid for rehydration is calculated?
12. How sanitation of bacillicarriers of shigellas and salmonellas is carried out?
13. What anti-epidemic events need to be held in the center of the revealed acute intestinal infection?

Information block.

ACUTE INTESTINAL INFECTIONS.

The diseases caused by numerous activators of OKA cause a number of the clinical syndromes differing with primary localization of process in digestive tract and also on degree of dehydration and toxic manifestations. Though concerning separate infections perhaps specific treatment, symptomatic and pathogenetic therapy at most of them it is similar.

Clinical syndromes.

Acute gastritis is shown usually by an eructation, nausea, repeated vomiting, pains in an upper part of a stomach, a language oblozhennost, morbidity of a stomach at a palpation. Appearance of a diarrhea confirms a gastroenteritis.

Acute enteritis is characterized by a frequent liquid watery chair that conducts to any given degree of dehydration. The diarrhea usually is followed by loss of appetite, nausea, in a stomach – pains, swelling, rumbling and capotement.

Acute colitis is shown by the speeded-up chair with impurity of slime and, often, blood (hemorrhagic colitis), tenesmus, colicy pains in a stomach. The spastic sigmoid gut is often palpated, children of younger age have a pliability or a gaping of an anus.

Organism dehydration (eksikoz) develops at most of patients from OKA, often defining disease severity. Each of three degrees of dehydration has characteristic symptoms. Distinguish isotonic, soledefitsitny (hypotonic) and water scarce (hypertensive) dehydration types.

The isotonic type of dehydration is characterized by proportional loss of water and electrolytes. The slackness, drowsiness are clinically observed. Skin and mucous membranes dry, the turgor of fabrics is reduced, the diuresis is reduced. Level of electrolytes in blood normal, the pachemia is profound.

The Soledefitsitny type of dehydration usually develops in a long diarrhea, inadequate infusional therapy, treatment by corticosteroids. Serious condition is clinically noted: slackness, an adynamia, block, repeated vomiting, an abdominal distension, skin cold, pale with the marble drawing, the tone of muscles is reduced, the diuresis is reduced, arterial blood pressure low, cardiac sounds are muffled, bradypnoea. The pachemia is pronounced. Level of potassium and sodium in blood is reduced. On the ECG at the low content of potassium (lower than 3 mmol/l) the lengthening of an interval of Q-t, decrease

in a voltage of teeth, the flattened or negative tooth of T, S-T interval shift, emergence of an additional tooth of U are noted.

The water scarce type of dehydration is shown by strong thirst, concern, excitement. Skin and mucous membranes dry, the tone of muscles is moderately reduced, breath is speeded up, the diuresis is slightly reduced. Level of electrolytes in blood high, the pachemia is mild.

General principles of treatment.

Food. Now hungry diets and water and tea pauses are not recommended as even at severe forms of OKA the digestive function of intestines remains, and starvation can contribute to the development of dystrophy. To children of younger age in the first days reduce food volume (no more than by 50%) and increase frequency rate of feeding to 6-8 times a day. The normal volume of food is restored not later than the 4th day of a disease. Food breast milk remains certainly. Acidified milk formulas are preferable to a supplementary feeding and a feeding up. In view of decrease of the activity of lactase at enterita the administration of low-lactose mixes (or 3-day kefir), porridges on vegetable broths is recommended; 5-10% rice and buckwheat porridges.

Rehydration therapy. The water loss connected with a diarrhea has to be compensated even in the absence of dehydration by the increased intake of liquid at the rate of 50-100 ml after each defecation. Use glyukozo-saline solutions for oral hydration (glyukosolan, oralit, regidron, etc.) or any added some salt liquid from 1-3% of sugar or starch (broths vegetable, rice), soups, fruit drink, etc.

Oral hydration is appointed in dehydration of I and II degree in 2 stages. In the first 4-6 h liquidate water and salty deficit, entering glyukozo-saline solutions of 50 ml/kg in dehydration of the I degree and 80 ml/kg – at the II degree. Liquid is entered fractionally on – to 1 teaspoon there are each 5-10 min., in vomiting – via the thin nazogastralny probe. The second stage – maintenance therapy before the termination of pathological losses of 80-100 ml/kg a day. At this stage glyukozo-saline solutions combine with electrolyte-deficient (water, tea, compote, rice and vegetable broths) in the ratio 1:1.

In heavy dehydration (III degree) or persistent vomiting the intravenous drop rehydration in combination with oral is shown. The volume of the liquid entered intravenously in the 1st day is 120-230 ml/kg. After elimination of dehydration the volume

of infusions reduce, but expand the volume of oral rehydration. Starting solution for infusion contains glucose of 20-50 g/l, sodium salts of 50-80 mmol/l, potassium of 2.5-3 mmol/l. At signs of hypovolemic shock enter colloidal solutions (reopoliglyukin, albumine, plasma).

The composition of aqueous salt solutions is calculated taking into account type of dehydration and ionic disturbances. In isotonic type of dehydration solution of glucose and saline solutions (Laktasol, Kvartasol, etc.) in the ratio 1:1 apply 10%, and children of the first months have lives – 2:1; at soledefitsitny type – in the ratio 1:3 and 1:2, at water scarce type – in the ratio 3:1 and 2:1 respectively.

At development of a metabolic acidosis (rn 7.1 and below) enter Laktasol solution or 4% solution of hydrosodium carbonate which volume in milliliters is determined as VE increased by a half of body weight of the patient. In the absence of a possibility of definition of BRAIDS enter according to clinical indications 1% hydrosodium carbonate solution on glucose at the rate of 2-4 ml/kg in two steps.

Treatment of shock. Fight against a hypovolemia is combined with administration of cardiacs, Prednisolonum (2-3 mg/kg a day) or a hydrocortisone (5-10 mg/kg a day).

Specific therapy. It is necessary to remember that the majority of OKA are caused by viruses or bacteria, resistant to antibiotics and khimiopreparata, so use of antibacterial agents is recommended only in heavy invasive infections. The description of the specific drugs used otherwise is provided at statement of data on separate infections.

For a number of infections (activators – Shigella, E. coli, Salmonella, proteas) are created the medical bacteriophages used at easy and medium-weight forms; at severe forms during an acute period they can strengthen intoxication in connection with increase in disintegration of bacterial cells. A phage appoint inside and in enemas in age dosages (according to the existing instructions).

Symptomatic therapy. Apply the medicines affecting motility of intestines (opiates, a belladonna, immodium), adsorbents (a kaolin, the smekt), dezinfitsiruyushche means (salol, Enteroseptolum, etc.). Enzymes, as a rule, do not influence the course of the disease, can cause side effects; according to the WHO recommendation, it is not necessary to use them for treatment of OKA.

Prevention.

Basis of prevention of OKA is observance of rules of personal hygiene, hygiene of food and water supply. In child care facilities the stringent control behind technology of preparation, transportation and implementation of food is important.

Isolation of the patient is carried out in a hospital (hard cases) or at home. In the infection centers for children the observation is established, control character and frequency of a chair, the bacteriological research of the persons which are in contact with patients is conducted.

As means of express prevention in the centers of some intestinal infections (at an esherikhioza, a typhoid) specific bacteriophages or bacteritic laktobakterin drugs, a bifidumbakerina are applied.

BACTERIAL DYSENTERY.

Etiology.

Dysentery is caused by Zonne and Fleksner's shigellas more often, is rare – Grigoriev-Shigi, Shtuttsera-Schmitz.

Epidemiology.

Dysentery – an infection with food and contact and household ways of distribution. The person is the main vessel of an infection. The patient in the first 3 days of a disease is most infectious. Patients with the erased form and bacillicarriers are dangerous. Dysentery is registered during the whole year with increase in incidence in aestivo-autumnal time. Immunity monospetsifichen concerning a look and a serotype of the activator.

The incubation interval proceeds from several hours to 7 days, the thicket is 2-3 days old.

Clinical picture.

Dysentery – a typical invasive infection as shigellas breed
in cells of an epithelium of a large intestine, causing a colitis picture. At children years typical option with development of colitis are more senior has acute onset with fervescence to high figures, intoxication symptoms are expressed. Several hours later hemorrhagic colitis develops (often a syndrome of distal colitis – a chair with slime in the form of "a rectal spittle").

The Gastroenterokolitichesky option (frequent in massive food infection) begins with repeated vomiting and the profound intoxication, organism dehydration can develop

later. The diarrhea develops several hours later after the beginning of a disease, by the end of the first – the beginning of second day the syndrome of distal colitis develops, the volume of excrements decreases, in them pathological impurity slime, often blood appear.

Dysentery at children of the first year of life proceeds sharply or as the subacute disease, is more often with development of a coloenteritis and enteritis. Weight of a disease at them is caused by disturbance of a hemodynamics and water and mineral exchange. Blood impurity in a chair appears less than at children of advanced age, and not always from the first day of a disease. The course of the disease is longer, especially in Fleksner's dysentery, often leads to development of dystrophy.

Atypical forms of dysentery proceed without development of colitis, sometimes without dysfunction of intestines and come to light at bacteriological inspection in connection with contact with the patient or in the centers of intestinal diseases.

The hypertoxical form (is more often at a shigellosis of Gritoryeva-Shigi) is characterized by development from the first hours of heavy neurotoxicosis and infectious and toxic shock.

Diagnosis.

The diagnosis is established on kliniko-epidemiological yielded and to results of crops a calla (discharge of shigellas) or method of the luminescing antibodies for identification of shigellas in native excrements. Serological methods (THRESHING BARN, is more rare than RPGA) are used at negative take of crops a calla, for diagnostics of the erased forms and their differential diagnostics with a transistor bacteriocarrier. Credits 1:100 for Zonne's dysentery and 1:200 are considered as diagnostic – for Fleksner's dysentery. Antibodies in blood appear from the 3-5th day of a disease and as much as possible accrue by 20th day from an onset of the illness.

Treatment.

In not hard cases the antibacterial therapy is inexpedient as resistance of shigellas to antibiotics is observed often. In more hard cases the treatment is carried out according to results of testing of the allocated strains. Use ampicillin (at sensitive strains), Nevigramonum, Biseptolum, furasolidone, in hard cases – rifampicin, aminoglycosides intramusculary.

SALMONELLOSIS.

Etiology.

Salmonellas treat antropozoonoza. They are steady in external environment, well breed in dairy products, meat, oil and so forth. The majority of strains is resistant to antibiotics.

Epidemiology.

Infection source – the person (the patient or the bacillicarrier), pets and birds, fishes, rodents. Ways of infection: food, water and contact and household. More often children of the first 2 years of life are ill. Rise in incidence is observed in spring and summer time. An incubation interval at a food way of infection from several hours to 2-3 days, at contact and household – up to 5-7 days.

Clinical picture.

The most frequent gastrointestinal form of a salmonellosis proceeds with the phenomena of a gastroenteritis, gastroenterocolitis.

Gastritis and gastroenteritis occur mainly in children 3 years are more senior. The sudden beginning with repeated vomiting, fervescence, an abdominal pain is characteristic. Then there are frequent watery excrements, sometimes with impurity of slime and blood, various degree dehydration of an organism and intoxication up to neurotoxicosis.

Less sharply the disease proceeds as enteritis without the significant symptoms of gastritis.

The gastroenterocolitis and coloenteritis – the most frequent form of a disease at children early, especially chest, age, begins sharply with a maximum of symptoms by 3-7th day of a disease. The chair sooner or later gets dark green coloring (like marsh ooze), has the character inherent to distal colitis less often, patients with impurity have blood. Vomiting at an enterokolitichesky form of a salmonellosis is observed infrequently, is usually connected with toxicosis; increase in a liver and spleen is quite often noted.

The typhus-like form (at the senior children) proceeds with long fever, a headache, vomiting, an adynamia, sometimes with signs of a meningism, nonsense, stupefaction, a gepatosplenomegaliya, an enteritny chair. At height of a disease the appearance of not plentiful rozeolezno-papular rash is possible.

The septic form occasionally meets at the weakened children of early age, premature. It is characterized by emergence of suppurative focuses in lungs, kidneys, a meninx, large joints, bones. Enterokolitny chair.

The erased forms of a salmonellosis are characterized by the slight and fast-passing symptomatology, diagnosed on the basis of epidemiological data and seeding of salmonellas from a calla.

Diagnosis.

The diagnosis is often obvious on a clinical picture, is confirmed by discharge of salmonellas from a calla, urine, blood and other environments and also serological on increase of an antiserum capacity by 4 times and more. At a single research (RPGA) for total antibodies credits 1:80 at children of 0-6 months, 1:160 – are 6 - 12 months diagnostic, 1:320 – 1 years are more senior; for tsisteinoustoychivy antibodies – 1:20 at children till 1 year and 1:40 – 1 years are more senior. Also methods of detection of free antigen in blood are used.

Treatment.

Antimicrobic therapy at a gastrointestinal form usually does not influence duration of symptoms and elimination of bacilli, it is appointed to the weakened children and children of the first three months of life. With sensitivity of the activator inside give ampicillin, gentamycin, polymyxin M sulfate, to children years – furasolidone, Nevigramonum are more senior. In hard cases and at suspicion appoint ampicillin to generalization of process intramusculary and intravenously, Gentamycini sulfas intramusculary and intravenously, rifampicin, cephalosporins of the third generation.

Tasks for independent preparation:

1. Solve situational problems.
2. Make questions of a test task on the subject "Intestinal Infections at Children".
3. Examine the patient with intestinal infection, describe the changes in the state of health in a workbook revealed by you.
4. Write prescriptions:
   a) gentamycin
   b) amoxicillin
   c) bifidumbacterium

d) linex

e) kreon

Independent work of students.

Scheme of inspection of the patient.

When collecting the anamnesis pay attention on:

- epidemiological data in family, children's collective;
- features of feeding of the child, error in food;
- the postponed earlier intestinal diseases;
- the beginning and dynamics of a disease before arrival of the child in hospital;
- the treatment spent at home.

At an objective research to pay attention on:

- weight of a condition of the child;
- presence of symptoms of toxicosis;
- presence of symptoms of dehydration;
- color and humidity of integuments;
- condition of food of the child and turgor of soft tissues;
- whether there was a loss in the weight, and what during a disease;
- frequency and interrelation of vomiting with meal;
- frequency and the nature of a chair (examine it or in detail ask at mother);
- sizes of a liver and spleen.

At interpretation of datas of laboratory:

- in complete blood count test (maintenance of leukocytes, erythrocytes, hemoglobin);
- data of crops of blood on sterility;
- serological blood test;
- biochemical blood test (content of potassium, calcium, sodium);
- bacteriological research calla;
- scatological research calla;
- these rektoromanoskopiya;
- results of test of Tsuverkalov.

Situational tasks

Task No. 1

The child of 6 months came to clinic in a serious condition. Temperature 39.5ºæ, it is excited, thirst, features are pointed, vomiting of 5-6 times a day, a chair liquid, watery, bright yellow, contains a small amount of stool. The anus is close. The big fontanel sinks down, mucous membranes dry. Cardiac sounds deaf, ChDD – 60 in min.

Questions:

1. Your diagnosis?
2. Type of dehydration?
3. Appoint treatment.

Task No. 2

The child of 3 years arrived in a serious condition. Ached sharply, temperature to 38.9ºæ, vomiting up to 5 times, a headache, spasms increased. At survey pale, unconscious, poluzakryta eyes, a Crocq's disease, extremities cold. Deaf cardiac sounds. ChSS – 136 in the min. ABP – 100/50 mm Hg. The stomach is pulled in, the liver edge is palpated. Positive Kernig's sign.

In blood test: Nv – 100 g/l, Ayr. – 4.5 x 1012/l, Leyk. – 15.2 x 109/l, p.b. – 15%, with / I am 47%, limf. – 32%, m – 6%, SOE – 20 mm/hour.

In 12 hours there was a chair – stool poor, slime in the form of a spittle.

Questions:

1. Your diagnosis?
2. Additional inspection?
3. Treatment.

Task No. 3

The child of 11 months, came to department for the 3rd day of a disease. Complaints at receipt: vomiting up to 6 times a day, temperature 38.8ºæ, a chair frequent up to 15 times a day, flavovirent color with abundance of slime, a blood streak.

Objectively: weight – 6.7 kg, pale, refuses food, liquid drinks very badly, the turgor of fabrics is reduced, features are pointed, the anus gapes, a stomach soft at a palpation

painful, the liver acts from under edge of a costal arch on 2 cm, a spleen – on 1.5 cm.

Questions:

1. Expected diagnosis?
2. Plan of inspection?
3. Treatment plan?

Class in a subject:
"ACUTE RESPIRATORY VIRAL INFECTIONS"

I. Scientific and methodical justification of a subject.

SARS are a high-contagious and widespread infection of children of early age. Etiological diagnostics, in view of similarity of a clinical picture, presents considerable difficulties. Often repeating SARS contribute to the development of respiratory allergoses, forming of the chronic centers of infections in a nasopharynx. At untimely and insufficient treatment of a SARS quite often give a heavy course with development of complications, causing extensive damage to health of the children's population.

II. Purpose of activity of students on occupation.

The student has to know:

- SARS etiology;
- SARS epidemiology;
- pathogenesis of a SARS;
- classification of respiratory viruses;
- the clinical features of a SARS caused by various viruses;
- methods of laboratory diagnostics;
- features of hospitalization of children, sick SARS;
- basic principles of treatment and prevention of a SARS.

The student has to be able:

- to purposefully collect the anamnesis taking into account epid. situations in the city, children's collective, family;
- to conduct an objective research of the child, having allocated at the same time SARS symptoms;

- to give an assessment to weight of a state;
- to allocate the leading pathological syndrome (neurotoxicosis, a laryngospasm, respiratory insufficiency, etc.);
- to make the clinical diagnosis;
- to make the plan of medical and preventive actions;
- to write prescriptions on the main medicines.

III. Content of training:

1) SARS (an etiopathogenesis, classification, features of clinic, diagnostics, treatment at children).

2) Differential diagnosis of the diseases proceeding with the catarrhal phenomena.

IV. Educational material security.

1. Visual aids: tables, schemes, multimedia presentations, videos.
2. Educational medical documentation (case histories, laboratory researches).
3. Technical means of training.
4. Literature.

V. The list of the recommended literature.

1. Children's diseases: the textbook / under the editorship of A.A. Baranov. – M.: GEOTAR-media, 2009. – 1008 pages.
2. Pediatrics: The textbook for medical schools. Under the editorship of N.P. Shabalov. – SPb: SpetsLit, 2006. – 895 pages.
3. Propaedeutics of children's diseases / to N.A. Geppa. – M.: GEOTAR-media, 2009. – 464 pages.
4. N.P. Shabalov. Neonatology: Manual. – M.: MEDpress-inform, 2009.
5. E.K. Tsybulkin. The menacing states at children. – M.: GEOTAR-media, 2007. – 226 pages.
6. V.F. Uchaykin, N.I. Nisevich, O.V. Shamsheva. Infectious diseases at children. – M.: GEOTAR-media, 2010. – 688 pages.
7. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Technique of a research of the child. The study guide for students. – Vladikavkaz, 2011. – 51 pages.

8. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Scheme of a case history. The study guide for students. – Vladikavkaz, 2011. – 38 pages.
9. Lectures on pediatrics.
10. Methodical instructions for out-of-class work of students of the 5th course of medical faculty on discipline "Pediatrics".

VI. List of questions for check of initial level of knowledge:

1. Give characteristic of respiratory viruses.
2. List the main pathogenic influences of respiratory viruses.
3. List the most widespread influenza strains.
4. Call a way of transfer and susceptibility to an influenza virus.
5. Call the main symptoms of defeat in a SARS.
6. List methods of laboratory diagnostics in a SARS.

VII. List of questions for check of final level of knowledge:

1. List the main clinical options of flu.
2. Call the most characteristic clinical symptoms of flu.
3. List flu complications.
4. List methods of specific and nonspecific therapy of flu.
5. List anti-epidemic actions in flu.
6. What epidemic features of a parainfluenza, adenoviral, respiratory and syncytial and enteroviral infection.
7. List the main clinical symptoms:
   a) parainfluenza;
   b) respiratory and syncytial infection;
   c) adenoviral infection;
   d) enteroviral infection;
8. List clinical options of above-mentioned respiratory infections.
9. Call complications of various forms of respiratory viral infections.
10. List the main therapeutic actions.
11. Call the principles of emergency treatment at:
    a) neurotoxicosis;

b) hyperthermia;

c) convulsive syndrome;

d) cardiovascular insufficiency;

e) acute respiratory insufficiency;

e) laryngotracheitis;

12. List preventive actions in a SARS.

Information block.

The Acute Respiratory Viral Infections (ARVI) are a group of the diseases of various etiology having uniform clinical manifestations.

Now it is established that the vast majority of acute respiratory diseases has the virus nature. Flu, a parainfluenza, adenoviral, respiratory and syncytial, rinovirusny, enteroviral, koronavirusny diseases and also infections caused by mycoplasma pneumonia belong to them.

The general for all agents of SARS are small firmness in external environment, high sensitivity to effect of disinfectants, ultra-violet radiation and drying. A disease source in all SARS is the patient or a convalescent virus carrier.

The high incidence of a SARS in child care facilities is substantially connected with disturbance of sanitary and hygienic and anti-epidemic actions.

Along with the general clinical manifestations and epidemiological patterns each SARS has the features.

FLU.

Flu – the acute viral disease which is characterized by symptoms of the profound intoxication, damage of upper airways and bent to the complications caused by secondary bacterial flora.

Etiology.

The causative agent of flu is the virus from family of myxoviruses. Contains RNA. Distinguish three types of an influenza virus: And, In and Page. They are similar among themselves morphologically, but differ in antigenic structure. From three types of a virus type A is most changeable, he continuously changes the antigenic players, sometimes very sharply. The variability of an influenza virus is shown by change of surface antigens –

hemagglutinin (H) and a neuraminidase (N). Hemagglutinin and a neuraminidase change independently of each other, hemagglutinin is most often subject to changes.

At simultaneous change of both antigens the new subtype of virus A causing a pandemic is formed. Influenza strains of types B and C also have some changes of antigenic structures, but not so expressed to allocate subtypes.

In the epidemiological relation the fact of discharge of an influenza virus And not just from the person, but also from horses, pigs, many types wild and poultry is important. Influenza viruses In and With are allocated only from the person.

Epidemiology.

Large flu epidemics A arise at an interval of 2-3 years, and pandemics – with an interval about 10-15 years. Flu epidemics B arise at an interval of 3-4 years. The flu caused by viruses of S type is noted sporadically or in the form of small flashes in the closed collectives.

Infection source in flu – the patient, especially at the lungs erased and asymptomatic forms as the diseased is not isolated from collective. The patient is especially infectious at the height of a disease, duration of the infectious period of 4-7 days. The infection is transmitted in the airborne way.

Susceptibility to flu high. People at any age are ill. Children of the first months of life have flu slightly less often because part of them has the immunity received in the transplacental way from mother. Since 6 months this passively received immunity practically at all disappears, and children from this age become especially susceptible to flu.

Thus, general susceptibility to flu, the unstable type-specific immunity, a short incubation interval (1-2 days), an airborne way of transfer of a disease create favorable conditions for mass spread of this acute infection.

Clinic.

Incubation interval of several hours to 1-2 days. In comparison with other SARS the flu is characterized by the profound intoxication; the catarrhal phenomena from upper airways insignificant also appear not at once.

Clinical manifestations of flu can vary from erased to severe hypertoxical forms. The disease begins sharply with temperature increase to 38-39 °C and above. The fever,

vomiting are possible. Degree of manifestation of intoxication as well as temperature height, depends on weight of a disease.

Children of advanced age complain of a headache, eyeball pains, in a stomach, a sleep disorder, they quite often note catarrhal conjunctivitis and an injection of vessels of scleras. Children of early age (from 1 year to 3 years) can have an expressed meningoentsefalichesky syndrome (repeated vomiting, a loss of consciousness, spasms, meningeal symptoms, etc.).

Toxic impact of an influenza virus on vegetative nervous and vascular systems is clinically shown by sharp pallor of the child, marbling of integuments. Cyanosis of a nasolabial triangle, a Crocq's disease, a hemorrhagic syndrome are observed (bleeding from a nose, dot hemorrhages on skin and mucous membranes). In extremely hard cases there can be a collapse.

The catarrhal phenomena are characterized by congestion of a nose, then not plentiful mucous discharges in the beginning. In a stomatopharynx diffuse hyperaemia, small puffiness of tonsils, dot hemorrhages on a mucous membrane of a soft and hard palate are noted. At children of early age in flu the croup syndrome (voice osiplost, the rough barking cough, the complicated breath) can develop. In uncomplicated flu sharply arisen croup syndrome quickly is liquidated. In case of accession of secondary microbic flora a course of a syndrome of a croup longer, sometimes wavy. At the same time on a mucous membrane of a throat and a trachea there can be, besides hypostasis and hemorrhages, purulent and necrotic manifestations.

In the 1st day of a disease the leukocytosis of neutrophylic character with small shift is noted to the left. In the next days (2-3rd day) find a leukopenia, sometimes an eosinophilia, SOE is not raised.

Flu is characterized by fast emergence of symptoms (by the end of 1 day there is a developed disease picture) and their same fast return dynamics. At the uncomplicated course of the disease temperature keeps usually 2-4 days, in parallel with decrease in temperature also intoxication symptoms disappear.

On weight the flu is subdivided into an easy form, moderately severe, heavy (toxic), hypertoxical and erased.

Despite mild clinic of initial manifestations of flu, a disease at children of the first year of life proceeds more hard, than at children of advanced age, in connection with frequent complications (otitis, pneumonia). Lethality, especially at children of the first 6 months is lives, higher, than at children of advanced age.

Complications in flu arise in different terms from an onset of the illness. They have the virus and bacterial nature.

Segmentary hypostasis – specific influenzal damage of lungs. It arises in the first days of a disease and quickly disappears. These changes are localized within one or several segments of a lung. In extremely hard cases the hemorrhagic hypostasis of a lung is possible.

Specific virus damage of lungs in flu is so-called interstitial pneumonia. Inflammatory changes from respiratory organs – it is purulent - necrotic or fibrinous laryngotracheitis, bronchitis, pneumonia (segmented or focal), pleurisy, a tonsillitis – are connected with activation of microbic flora and have a virus and bacterial etiology. These are the most frequent complications in flu, especially at children of early age.

Quite often the disease is complicated by otitis, sinusitis. There are meningitis, encephalitis less often. Neuralgia, neuritis and sciatica at children develop considerably less than at adults.

From heart in an acute period on the ball of toxicosis functional disturbances which quickly disappear in process of desintoxication can be. However also more severe damages of heart, for example myocarditis which arises in the convalescence period – on the 2-3rd week from an onset of the illness are observed. In genesis of these myocardites the infectious and allergic component lies.

Laboratory diagnostic methods.

The influenza virus can be allocated from slime of a pharynx and a nose and also from blood in the first days of a disease. However the percent of discharge is low.

Serological tests – neutralization test, RTGA and RSK as well as virus discharge, are methods of retrospective diagnostics.

Blood for serological tests is taken twice – at the beginning of a disease and in the convalescence period (end of the 2nd week). Increase of an antiserum capacity by 4 times

and more is diagnostic. It is necessary to consider that at children of the first year of life the credits of anti-bodies lower and accrue they in later terms.

Express diagnostic method of flu and other SARS is the immunofluorescence method.

Treatment.

Appoint a bed rest, good nutrition, warm drink. At easy and moderately severe forms carry out symptomatic therapy (at a hyperthermia – febrifugal, hyposensibilizing (Suprastinum, Dimedrol, tavegil, etc.), appoint leukocytic interferon on 0.25 ml in each nasal course not less than 4 times the day or recombinant interferon (grippferon – activity of 1 bottle is equal to activity of 100 ampoules of human interferon, viferon) possessing antiviral and immunomodulatory action.

Causal treatment at medium-weight forms consists in prescribing of remantadin on 50 mg 2 - 3 time or arbidol on 100 mg 2-3 times a day.

At toxic forms enter specific anti-influenza immunoglobulin intramusculary (0.15-0.2 ml/kg), according to indications carry out infusional disintoxication therapy. In the profound neurotoxicosis corticosteroids (Prednisolonum at the rate of 2 mg/kg) within 1-2 days, dehydrational therapy are shown (intramusculary 25% magnesium sulfate solution, diuretics, intravenously 20% glucose solution).

At a severe form of flu to the children of the first 2 years of life who are especially weakened by associated diseases at which bacterial complications are more probable appoint antibacterial therapy (streptocides or antibiotics).

Complications treat by the general rules.

Prevention.

Carry out the general sanitary and preventive actions (the sanitary and hygienic maintenance of child care facilities, the correct mode, radiation of rooms a mercury-quartz lamp, etc.). The great value is attached to measures of hardening of children.

In the epidemiological center it is recommended to all children to apply interferon on the 2nd drop in each nasal course 4 times a day during all flash.

In fight against flu the vaccinal prevention is crucial.

PARAINFLUENZA

– the acute viral disease which is characterized by the short-term fever moderated by intoxication, Qatar of upper airways frequent a croup syndrome.

Etiology.

Activators of a parainfluenza are parainfluenza viruses, belong to group of myxoviruses, contain RNA. Parainfluenza viruses have similarity to influenza viruses, differ in stability of an antigenic structure.

Epidemiology.

The incidence increases in cold season (fall, winter, spring). An infection source – the patient. A way of transfer – airborne. Children of the first 2-3 years of life are ill more often. At an infection drift in child care facilities, especially in the day nursery, diseases caused by the first and second serovar of a virus of a parainfluenza arise in an epidemic form. All children who had no virus neutralizing antibodies are surprised usually. Immunity after the postponed parainfluenza type-specific and quite resistant therefore by 5-6 years most of children already has virus neutralizing antibodies to parainfluenza viruses.

Clinic.

Incubation interval from 1 to 7 days (on average 3-4 days). Clinical manifestations vary from easy katar of upper airways to pneumonia.

The disease begins sharply with temperature increase. Symptoms of the general intoxication even at high temperature are expressed poorly or moderately.

The most frequent symptom at a parainfluenza – dry, rough persistent cough. Rhinitis is profound poorly, only the congestion of a nose is usually noted. Osiplost and hoarseness of a voice, rough cough, sometimes throat stenosis (croup syndrome).

The croup meets at children aged from 1 year up to 5 years more often. Almost does not meet at children of the first half of the year of life of grain. The croup at a parainfluenza, as a rule, develops sharply and serves as the first manifestation of a disease. Accession of a syndrome of a croup in later terms of a disease (after the 3rd day) is result of stratification of consecutive microbic infection and is regarded as a parainfluenza complication.

At an uncomplicated course of a parainfluenza the fever, cough, cold stick to 1-6 days. The syndrome of a croup disappears in 1-3 days.

Outcome of an uncomplicated parainfluenza favorable.

Complications at a parainfluenza (pneumonia, otitis, a tonsillitis, sinusitis, etc.) are connected with stratification of consecutive microbic infection and have virus and bacterial character. They are observed more often at children of early age and at the children burdened by associated diseases.

Reliable establishment of an etiology of a disease is possible by means of laboratory methods **(**immunofluorescence, a serological research).

Treatment.

Symptomatic. There are no specific methods of treatment.

ADENOVIRAL INFECTION

it is characterized by the fever moderated by intoxication, the expressed catarrhal phenomena from upper airways, reaction of the lymphoid device of a stomatopharynx and frequent damage of eyes.

Etiology.

The disease is caused by the viruses allocated from the adenoid fabric and tonsils removed at operation at children. The immunity is developed type-specific.

Epiteliotropna adenoviruses, have cytopathic property, contain DNA. Adenoviruses are steadier in external environment, than influenza viruses.

Epidemiology.

Adenoviral diseases meet during the whole year, is more often – in the winter and in the spring. Adenoviral diseases also are frequent in the summer.

Epidemiological flashes are observed in child care facilities among children aged up to 2-3 years. Spread of an infection in children's collectives gradually accrues within 10-12 days, then the number of the diseased decreases and the flash is gradually liquidated. The "explosive" nature of flash with a simultaneous disease of many children is sometimes observed.

Infection source – the patient, a convalescent and healthy virus carriers. Adenoviruses are allocated till 7-12th day from the beginning of a disease, at certain children – up to 3 weeks and more.

Way of transfer – generally airborne. Also fecal and oral way of transmission of infection is possible (adenoviruses breed in intestines and are allocated at had a disease from excrements).

Clinic.

The incubation interval averages 4-5 days, can reach 2 weeks.

Clinical manifestations of a disease are very polymorphic. Various clinical forms are described: acute feverish pharyngitis, faringokonjyunktivalny fever, sharp Qatar of upper airways, pneumonia, Sander's disease, pertussislike syndrome, hemorrhagic syndrome.

The beginning of a disease usually sharp, but various symptoms arise not at the same time, and gradually and consistently.

Acute onset of a disease is characterized by temperature increase, emergence of the catarrhal phenomena from upper airways. The prevalence of local catarrhal symptoms of a disease over the general is characteristic. The type of the patient with an adenoviral infection is typical: the person slightly odutlovato, pastozno, mucous discharges from a nose, unilateral or bilateral conjunctivitis are plentiful, it is frequent with an injection of vessels of scleras. Conjunctivitis can be catarral, follicular and filmy. Less often the keratoconjunctivitis meets (turbidity of a cornea without its ulceration). Sometimes there is hemorrhage in a sclera. The hyperplasia of adenoid tissue of a stomatopharynx very frequent emergence of clinic of a catarrhal, lacunar or filmy angina and also granulosa pharyngitis is characteristic of an adenoviral infection

Peripheral lymph nodes are often increased, possible the mesadenites which are shown attacks of an abdominal pain, At children of the first year of life the adenoviral disease can be followed by intestinal disorders.

Pneumonia in an adenoviral infection is observed also generally at children of early age. There is it usually from the first days of a disease and has virus and bacterial origin. Adenoviral pneumonia differs in weight and duration of a course (the necrotic nature of defeat of pulmonary fabric is possible).

The adenoviral infection in hard cases proceeds during 2-3 weeks. The temperature curve can have wavy character.

Complications.

In an adenoviral infection of a complication are connected with stratification of secondary bacterial flora (otitises, pneumonia, sinusitis) and meet mainly at children of early age.

Treatment is generally symptomatic, at complications antibacterial drugs are shown.

RESPIRATORY AND SYNCYTIAL INFECTION

is one of the most serious viral diseases of respiratory organs at children of chest and early age. At RS the infections are surprised mainly lower parts of respiratory tract with development of bronchiolites.

Etiology.

The disease-producing factor – RS a virus contains RNA, belongs to independent group in family of paramyxoviruses. In external environment the virus is unstable.

Epidemiology.

The infection is extended by RS everywhere. Children of early age are most susceptible to it. At a drift of this infection in child care facility all children aged till 1 year practically get sick. As after RS of an infection the unstable immunity develops, recurrent diseases are observed. RS an infection is registered all the year round, however flashes in child care facilities arise usually in the winter or in the spring. A source of a disease is the sick person. The infection is transmitted vozdushno in the drop way.

Clinical picture.

Incubation interval on average 3-4 days. Clinical manifestations can vary from very easy damages of upper airways to heavy bronchiolites, bronchitis with an obstructive syndrome and pneumonia.

At children of advanced age and adult RS the infection usually proceeds easily in the form of an acute respiratory disease without temperature increase or with increase it to subfebrile. The general state worsens slightly. Duration of a disease is from 2 to 10 days.

The most severe forms of a disease which are followed by damage of the lower airways are observed at children of the first year of life. The disease at them develops usually gradually. In the beginning rhinitis is noted, then cough joins (sometimes paroxysmal character), temperature increases in 2-3 days or later in connection with involvement in process of the lower airways.

Weight of a condition of the child at the same time is caused not by manifestations of the general intoxication, and symptoms of respiratory insufficiency. The leading symptom is an asthma, mainly expiratory character, retraction of compliant places of a thorax is noted. A lot of scattered small-bubbling damp rattles is listened. Emphysema of lungs accrues, cyanosis develops. The picture of an obstructive syndrome develops.

The suddenness of emergence of these symptoms, the diffuse bilateral nature of damage of lungs, lack of focal infiltrative shadows in lungs on the roentgenogram and also fast return course of disease are characteristic of a bronchiolitis. However in each case it is not simple to exclude pneumonia which at children of early age can arise along with a bronchiolitis. In some cases at RS of an infection the croup syndrome can develop.

Complications (otitis, focal pneumonia) are connected with stratification of secondary microbic flora.

Diagnosis.

The bronchiolitis and obstructive syndrome and also absence of intoxication, low temperature against the background of the significant respiratory insufficiency give the grounds to suspect RS an infection. Epidemiological data (fast spread of diseases in the center of an infection and defeat of all children of the first year of life) substantially confirm the assumption of infection RS.

Virus discharge from washout of a nasopharynx, increase in pair serums of a caption of complement-linked and virus neutralizing antibodies undoubtedly confirm the clinical diagnosis, however this diagnostics is retrospective.

Treatment.

Symptomatic treatment, depends on disease severity. At the expressed concern of the patient appoint Pipolphenum at the rate of 1-3 mg/kg of body weight a day intramusculary, in more hard cases – sodium hydroxybutyrate on 50-100 mg/kg a day. At cardiovascular insufficiency apply cardiac glycosides. At a combination of an obstructive syndrome to pneumonia corticosteroids within 2-5 days and antibiotics are shown.

From specific means it is recommended to dig in leukocytic interferon in a nose.

Specific **prevention** is not developed.

Tasks for independent work:

1. Solve situational problems and tasks of test control.

2. Examine the patient with a SARS, describe the revealed changes in state of his health in a notebook.
3. Write in a notebook prescriptions on:
   - remantadin
   - interferon
   - paracetamol
   - Pipolphenum

Independent work of students.

Scheme of inspection of the patient.

When collecting the anamnesis pay attention on:

- epidemiological situation in family, in children's collective which is visited by the child;
- the beginning, dynamics of a disease before arrival of the child in a hospital;
- treatment of the child before hospitalization.

At an objective research to pay attention on:

- weight of a condition of the child, nature of temperature, neurologic status;
- existence of catarrhal symptoms, estimate degree of their expressiveness;
- color of integuments;
- heart rate and dykhaniye, their ratio;
- these percussions of a thorax;
- these auscultations of lungs;
- the heart sizes given to auscultation;
- sizes of a liver and spleen, peripheral lymph nodes;
- examine a pharynx.

At interpretation of datas of laboratory:

- complete blood count test;
- virologic test of blood, urine, calla, smears from a pharynx and a nose;
- analysis of urine;
- conclusion of the ENT specialist;
- given to a thorax X-ray analysis.

Situational tasks.

Task No. 1.

Girl, 9 months. Ached sharply, from temperature rise of the body to 38.8 wasps "barking" cough, an osiplost of a voice, mucous separated from a nasal cavity. By the evening the state worsened, there was a complicated breath, concern. The child was taken to hospital.

At receipt: temperature of 38.2 wasps, serious condition, is expressed an asthma (ChD 60 in min.) inspiratory character with inflating of wings of a nose and participation of auxiliary muscles of a thorax, retraction of a jugular pole and epigastrium. Cyanosis of a nasolabial triangle and finger-tips, a "marble" shade of skin is noted. The voice osiply, Zev is hyperemic. The catarrhal phenomena are moderate. Frequent unproductive cough disturbs. Cardiac sounds are muffled, arrhythmic (ChSS – 100-130 in min.). Loss of a pulse wave on a breath. In lungs breath rigid.

The laringoskopiya is carried out: an entrance to a throat of 1-2 mm, in an entrance to a throat – a large number of a mucous phlegm of transparent color, bright hyperaemia of arytenoid cartilages, subcopular space, hypostasis of phonatory bands.

Complete blood count test: Ayr – 3,5 x 10 12/l, Nv – 110 g/l, C. the item – 0.89, Leyk – 4.1 x 109/l, p.b. – 3%, with / I am 36%, e – 2%, l – 50%, m – 9%, SOE – 10 mm/hour.

On the roentgenogram of a thorax strengthening of the vascular drawing, focal shadows is not present.

Virologic research of a smear from a nasopharynx in reaction of an immunofluorescence: Parainfluenza (+); Flu (-); RS (-); Adenovirus (-).

Questions:

1. Make the clinical diagnosis.
2. What additional researches need to be conducted?
3. Appoint treatment.

Task No. 2.

The child of 7 months, is sick within 3 days. Temperature 38-39os, uneasy, the appetite is reduced. Damp cough and plentiful mucous discharges from a nose is noted.

At receipt in a hospital: a moderately severe state, temperature of 38.3 [wasps], eyelids hydropic, conjunctivas are hyperemic. On a lower eyelid there is a white film which is freely removed on the right, the surface does not bleed. Lymph nodes of all groups are increased up to 1-2 cm, painless, elastic. Tonsils and follicles on a back wall of a throat are increased, the pharynx is hyperemic. The complicated nasal breath, a plentiful mucopurulent discharge from a nose is noted. In lungs rigid breath, wire rattles. Rhythmical cardiac sounds. ChSS – 132 beats/min. Liver + 3.5 cm, spleen + 1.5 cm. The chair issued.

Complete blood count test: Ayr – 4,3 x 10 12/l, Nv – 133 g/l, C. the item – 0.93, Leyk – 7,9 x 10 9/l, p.b. – 3%, with / I am 38%, – 1%, e – 2%, l – 51%, m – 4%, SOE – 4 mm/hour.

On *the roentgenogram of bodies of a thorax* – pulmonary the drawing is strengthened, pulmonary fields without focal and infiltrative shadows, roots are structural, a median shadow without features, a diaphragm accurate, sine are differentiated.

Reaction of an immunofluorescence: A parainfluenza (-); Flu (-); RS (-); Adenovirus (+)

Questions:

1. Make the clinical diagnosis.
2. Carry out the differential diagnosis.
3. Appoint treatment.

Test control.

1. The influenza virus belongs to family:
   A) reoviruses
   B) picornaviruses
   C) orthomyxoviruses
   D) retroviruses
2. Reaction is applied to express diagnosis of an adenoviral infection:
   A) fixation of the complement
   B) slowing down of hemagglutination
   C) immunofluorescence
3. Degree of a stenosis of a throat defines:
   A) existence in lungs of damp rattles

B) degree of respiratory insufficiency

C) noisy breath

4. Main symptoms of flu:

   A) headache

   B) high fever

   C) increase in a liver

   D) cough

   E) lymphadenopathy

5. Are characteristic of a croup:

   A) the rough barking cough

   B) osiply voice

   C) expiratory asthma

   D) inspiratory asthma

   E) noisy breath

6. Symptoms of an adenoviral infection are:

   A) catarrhal phenomena in a stomatopharynx

   B) joint pains

   C) increase in cervical lymph nodes

   D) conjunctivitis

   E) nodal erythema

7. Complications of flu are:

   A) tonsillitis

   B) otitis

   C) colitis

   D) pneumonia

8. Faringokonjyunktivalny fever is observed at:

   A) rinovirusny infection

   B) flu

   C) adenoviral infection

   D) parainfluenza

9. In an enteroviral infection are noted:

A) fever

B) joint pains

C) necrotic tonsillitis

D) myalgias

E) encephalitis and myocarditis of newborns

10. Are characteristic of enteroviral diseases:

A) pneumonia

B) epidemic myalgia

C) purulent meningitis

D) serous meningitis

E) herpangina

Class in a subject:
"POLICLINIC"

I. Scientific and methodical justification of a subject

The out-patient and polyclinic help to the children's population takes the leading place in the general health care system and is carried out by means of wide network of children's policlinics and polyclinic departments. According to it the program of training of students doctor books includes studying structure, the main documentation of children's policlinic, functional duties of the local pediatrician, nurse, narrow experts in ensuring the treatment-and-prophylactic help to children from the birth up to 17 years.

II. Purpose of activity of students on occupation:

The student has to know:

- organization, structural units and states of children's policlinic;
- main objectives and activities of children's policlinic;
- functions of children's policlinic;
- organization, principles of work and task of the local pediatrician;
- equipping and work of an office of the healthy child;
- organization and equipment of a pediatric office;
- principles of dispensary service of children of the first year of life;
- principles of the organization of vaccination;
- the principles of distribution of children on groups of health;
- principles of the organization of a hospital at home;
- features of the organization of work with teenagers;

The student has to be able:

- to analyze data of registration and reporting documentation;
- to collect and estimate anamnestic data;
- to carry out independent patronage of the newborn and children of the first year of life;
- to make out documentation with instructions of group of health and coefficient of health;
- to carry out the scheduled maintenance directed to education of the healthy child;

- it is timely to make the diagnosis;
- to organize a hospital at home;
- to conduct an anthropometrical research and to estimate physical development of the child;
- to give an assessment of psychological development of the child;
- to define complex assessment of the state of health;
- to make the plan of preventive inoculations for children 1-2 years of life;
- to render emergency aid at a pre-hospital stage.

III. Content of training:

1. Main objectives of children's policlinic.
2. Structural units of children's policlinic and their function.
3. Filter role.
4. Main sections of work of the local pediatrician.
5. Tasks and role of prenatal patronage.
6. Patronage of newborns, terms, tasks.
7. Medical examination of health of children about one year and its purpose.
8. Medical examination of children from one to 2 years.
9. Concept about groups of health and the index of health.
10. Scheduled maintenance of the district doctor.
11. Medical examination of sick children and group of "risk".
12. Calendar of preventive inoculations.
13. The basic rules when carrying out preventive inoculations.
14. Types of sanitary and educational work.
15. role of the patronage nurse in medical examination of healthy children.
16. Medical work on the site.
17. Main documentation of the district doctor.

IV. Educational material security.

1. Visual aids: tables, schemes, multimedia presentations, videos.
2. Educational medical documentation (case histories, laboratory researches).
3. Technical means of training.

4. Literature.

V. The list of the recommended literature.

1. Children's diseases: the textbook / under the editorship of A.A. Baranov. – M.: GEOTAR-media, 2009. – 1008 pages.
2. Pediatrics: The textbook for medical schools. Under the editorship of N.P. Shabalov. – SPb: SpetsLit, 2006. – 895 pages.
3. Propaedeutics of children's diseases / to N.A. Geppa. – M.: GEOTAR-media, 2009. – 464 pages.
4. N.P. Shabalov. Neonatology: Manual. – M.: MEDpress-inform, 2009.
5. E.K. Tsybulkin. The menacing states at children. – M.: GEOTAR-media, 2007. – 226 pages.
6. V.F. Uchaykin, N.I. Nisevich, O.V. Shamsheva. Infectious diseases at children. – M.: GEOTAR-media, 2010. – 688 pages.
7. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Technique of a research of the child. The study guide for students. – Vladikavkaz, 2011. – 51 pages.
8. Z.D. Kaloyeva, K.M. Dzilikhova, S.K. Karyaeva, etc. Scheme of a case history. The study guide for students. – Vladikavkaz, 2011. – 38 pages.
9. Lectures on pediatrics.
10. Methodical instructions for out-of-class work of students of the 5th course of medical faculty on discipline "Pediatrics".

VI. List of questions for check of initial level of knowledge:

1. What is the physical development? In what parameters it is estimated?
2. How psychological development of the child is estimated?
3. What is "acceleration"? What factors influence this process?
4. In what parameters the state of health of the child is estimated?
5. Give definition to the concept "degree of a maturity of the newborn". How this indicator is estimated?
6. How many groups of health do you know? How distribution of children on groups of health is carried out? What it has practical value?
7. What is "tooth" age? How this indicator is estimated?

8. How assessment of biological age of children is made?

VII. List of questions for check of final level of knowledge:

1. Call the main objectives of children's policlinic.
2. List structural units of children's policlinic and call their functions.
3. What main sections of work of the local pediatrician are known to you?
4. For what purpose who and to what terms carries out prenatal patronage?
5. How patronage of newborns is carried out?
6. Call the basic principles and the purposes of medical examination of children about one year.
7. Give definition to the concept "index of health" how this indicator is calculated?
8. What does scheduled maintenance of the district doctor consist in?.
9. As well as medical examination of sick children and group of "risk" is for what purpose carried out?
10. What is "the calendar of preventive inoculations"? For what it is made?
11. Call the basic rules when carrying out preventive inoculations.
12. what types of sanitary and educational work do you know?
13. What role is played by the patronage nurse in medical examination of healthy children?
14. How will medical work on the site be organized?
15. Call the main forms registration documentation on the site.

Situational tasks

Task No. 1

The child of 5 months, was born from the II pregnancy proceeding with toxicosis of the II half, anemia of pregnant women was born weighing 3400 gr, growth in time – 51 cm, assessment across Apgar of 8 - 9 points, the period of adaptation proceeded without features. Is on breastfeeding. Body weight at the moment 6900 gr., growth - 66 cma breast circle – 44.5 cm, a head circle – 43.5 cmthe child active, learns mother's voice, a beret from hands a toy, actively babbles. Turns over from a back on a stomach, in situation on a stomach leans on palms. Was ill nothing. On bodies and systems - without deviations.

Task: define group of health of the child.

Task No. 2

Boy of 2 years. Was born 35 weeks, from the I pregnancy proceeding with interruption threat with the body weight of 1850 gr, growth in time – 45 cm. Since 2 months on artificial feeding. At the moment body weight – 10500 gr, growth – 83 cm, a surrounding goal. – 49 cm, surrounding gr. – 51 cm. From the postponed diseases – acute catarrhal otitis, ORZ of 5-6 times a year. Psychological development corresponds to age. On bodies and systems without pathology.

Task: define group of health of the child.

Task No. 3

The girl of 7 years, is observed at the nephrologist concerning chronic pyelonephritis. Was born from from the I normally proceeding pregnancy, in time, with body weight 3200 gr., growth – 50 cm. On breastfeeding up to 6 months, the feeding up is entered in time. From the postponed diseases – frequent (up to 5 times a year) ORZ, chicken pox (in 3 years), epidemic parotitis (in 5 years). The allergological anamnesis is burdened (the girl has a food and medicinal allergy, reaction to penicillin, novocaine, a citrus, cocoa). Pyelonephritis about 2 years for the last year 4 times have it was treated concerning aggravation. Physical development: body weight – 21.5 kg, growth – 118 cm. Psychological development – corresponds to age.

Task: define group of health of the child.