Academic and ResearchMedical Institute

Department of Paediatrics

"Approved"

at sub-faculty meeting

"_____20__, protocol №___

Head of Department

prof. _____O. I. Smiyan

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• Study Guide for Practical Work of Students

for foreign students 6 course medical institute with

English form of education

Topic: "Differential diagnosis of infections with exanthema syndrome in children."

(scarlet fever, measles, rubella, chicken pox, pseudotuberculosis) and noninfectious allergic rash

Course VI

English-speaking Students' Medical Institute

Relevance of the topic:

Practice shows growth in recent years, difficulties in diagnosis of diseases which are accompanied by rash is associated with changes in their clinic and epidemiology. To the clinical changes should include increased light and missing forms of disease, reduce complications typical for these diseases. Epidemiological changes struck in violation of the previously existing relationship with the incidence of childhood infections, rash. Yes, thanks to the mass refusal of parents on active immunization increased the incidence of measles. Rubella. Also, increased incidence of scarlet fever, pseudotuberculosis, enteroviral infection. Variety of forms of these infections significantly complicates the recognition and differentiation from other diseases.

The increase in current conditions the frequency of skin lesions of allergic nature and causes additional difficulties in the recognition of rash.

LESSON OBJECTIVES:

Based on the knowledge and skills that a student received on V course of diagnosis, treatment and prevention of diseases which are accompanied by rash, teach differential diagnosis, rational treatment and prevention of infectious diseases that are accompanied by rash.

The student must know:

1. Differential diagnosis of scarlet fever and pseudotuberculosis.

- 2. Differential diagnosis of scarlet fever and rubella.
- 3. Differential diagnosis of measles and rubella.
- 4. Differential diagnosis of measles and meninhokoktsemiyi.

5. Differential diagnosis of rubella and allergic rashes.

6. Differential diagnosis of scarlet fever and allergic rashes.

7. Differential diagnosis meninhokoktsemiyi and allergic rashes.

8. Monitoring patients with scarlet fever, rubella, measles, chicken pox on an outpatient basis.

9. Indications for hospitalization of patients with scarlet fever, measles, rubella, chicken pox.

10. Complications with scarlet fever, measles, rubella, chicken pox.

11. Anti-epidemic measures in the foci, scarlet fever, measles, rubella. chicken pox, meningococcal disease.

The student should be able to:

1. Follow basic rules of the bed next to an infectious patient.

2. Collect history of the disease and to determine the epidemiological situation (set availability contact with infectious patients).

3. Examine patients and to identify his main symptoms of infectious diseases (especially the appearance of rash and its disappearance).

4. Show this epidemiological anamnesis, anamnesis of the disease and review of the patient in the history of the disease and to explain the preliminary diagnosis.

5. Assign more tests to clarify the diagnosis and a differential diagnosis.

6. Evaluate research data.

7. Diagnosis and diagnosis to justify in the light of clinical, epidemiological and laboratory data.

8. Diagnose problems.

9. Conduct a differential diagnosis of infectious diseases that are accompanied by rash (measles, rubella, scarlet fever, chicken pox, pseudotuberculosis, meninhokoktsemiya) and noninfectious allergic rash.

10. Assign patient treatment, taking into account the severity of illness, the child's age, presence of complications, premorbid background of the child.

11. Identify the indications for hospitalization of a child suffering from an infectious disease that is accompanied by a rash (measles, rubella, scarlet fever, chicken pox, pseudotuberculosis, meninhokoktsemiya).

12. Organize a hospital infectious patients with infectious disease, which is accompanied by rash at home.

13. To plan preventive measures in foci of infection air-drop.

EDUCATIONAL OBJECTIVES:

ethics issues when working with patients on air-drip infection.

Interdisciplinary Integration:

Microbiology:

Know:

1. Characterization of causative agents of measles, rubella, scarlet fever, chicken pox, pseudotuberculosis, meningococcal infection. Basic properties of the causative agent.

2. Laboratory Methods of measles, rubella, scarlet fever, chicken pox, pseudotuberculosis, meningococcal infection.

3. Bacteriological. Virological and serological diagnostic methods.

Able to:

1. Conduct induction material for virological, bacteriological and serological studies.

Patanatomy:

Know:

1. Anatomopathological changes in organs with measles, rubella, scarlet fever, chicken pox, pseudotuberculosis, meningococcal infection.

Epidemiology:

Know:

1. Source of infection and transmission mechanism for measles, rubella, scarlet fever, chicken pox, pseudotuberculosis, meningococcal infection.

2. Epidemiological significance of the patient as a source of infection depending on the period of infection and its clinical course.

Able to:

1. Collect epidemiological history, to assess the epidemiological situation.

2. Set-up foci of infection.

Dermatology:

Know:

1. Morphology rash.

Childhood infectious diseases, 5 year:

Know:

1. Typical clinical picture of measles, rubella, chicken pox, scarlet fever, pseudotuberculosis, meninhokoktsemiyi.

2. Pathogenesis of measles, rubella, chicken pox, scarlet fever, pseudotuberculosis, meninhokoktsemiyi. Clinical classification. Clinic. Basic principles of therapy. Prevention in children.

Able to:

1. Survey of infectious patients.

LITERATURE ON THE TOPIC OF THE LESSONS:

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9. Children infectious diseases. Methodical instructions for practical lessons.

"Poliomyelitis" [Електронний ресурс] : for students specialty 7.110101 of

full-time studying / O. I. Smiyan, T. P. Bynda, O. G. Vasilyeva. — Електронне

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mononucleosis" on the discipline "Childhood infections" [Електронний ресурс] :for stud. of spec. 222 "Medicine" of full-time training / O. I. Smiyan, T. P. Bynda, K. O. Smiian, O. G. Vasilyeva. — Sumy : Sumy State University, 2023. — 46 p.

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Study Guide for Practical Work of Students for foreign students 6 course medical institute with English form of education

Topic: "Differential diagnosis of children's respiratory infections (diphtheria, mumps, whoopingcough, infectious mononucleosis) in the children. Differential diagnosis of angina and croup syndromes in various infectious and non-infectious diseases. Emergency conditions in children's respiratory infections. Emergency care for diphtheritic croup in children."

> Course VI English-speaking Students' Medical Institute

The theme urgency

Diphtheria is an acute infectious disease caused by Corynebacterium diphtheria and characterized by the appearance of a fibrinous membrane on the site of pathogen invasion, which can spread on to the tonsils, larynx and pharynx, leading to symptoms of toxemia and toxic lesions of the cardiovascular system, nervous system, adrenal glands and kidneys.

The causative agent in mumps is a filterable virus from the group of myxoviruses (Paramyxovirus parotitidis) that varies in size, averaging 100–200 nm. As seen by electron microscopy, it has a flattened spherical or irregular shape. It contains ribonucleic acid (RNA). The virus is of low stability and is rapidly inactivated by high temperatures, ultra-violet rays, weak formalin solutions, lyzol, and alcohol. It is grown on developing chick embryos. The mumps virus is pathogenic for monkeys, in which it produces a characteristic inflammation of the parotid glands.

The causative agent of whooping-cough is the Bordet-Gengou bacillus Haemophilus (Bordetella) pertussis, a small, ovoid, non-motile rod 0.5 to 2.0 \Box m long, gram-negative, strictly aerobic, and haemoglobinophilic. It grows best on a potato-glycerol blood agar (Bordet-Gengou culture medium). Other nutrients, however, particularly casein-carbon agar medium, are now widely used. When cultured, the bacillus forms small, round, lustrous colonies resembling drops of mercury. Its resistance is very low, and it succumbs rapidly to the effect of high temperature, direct sunlight, desiccation and various disinfectants.

The aim of the study: to teach students on the basis of information of anamnesis of illness, epidanamnesis and clinical displays diagnose ARD in the children, to make a differential diagnosis and antiepidemic measures in the nidus of infection.

A student must know:

- 1. Etiology and properties of the cause and causing factors of diphtheria.
- 2. Epidemiology (source of infection, ways of transmission, age-old receptivity and morbidity).
- 3. Pathogenesis of disease, pathomorphologic changes in the staggered organs.
- 4. Classification of clinical forms of diphtheria.
- 5. Clinic of typical form of diphtheria.
- 6. Methods of laboratory research.
- 7. Principles of therapy of diphtheria.
- 8. Measures of prophylaxis of diphtheria.
- 9. Etiology of infectious mononucleosis.
- 10. Epidemiology infectious mononucleosis.
- 11. Characteristic of Epstein-Barr virus (EBV).
- 12. Pathogenesis of disease, pathomorphologic changes in the staggered organs and blood cells.
- 13. Classification of clinical forms of infectious mononucleosis.
- 14. Clinic of infectious mononucleosis.
- 15. Clinic of acute form Epstein-Barr viral infection.

- 16. Clinic of chronic form Epstein-Barr viral infection.
- 17. Hematologic disorders are typical for infectious mononucleosis.
- 18. Methods of laboratory research.
- 19. Principles of therapy of infectious mononucleosis.
- 20. Antiviral treatment of Epstein-Barr viral infection.
- 21. Postface of infectious mononucleosis.

22.Other clinical forms of Epstein-Barr viral infection.

- 1. Etiological factor of mumps.
- 2. Classification of mumps.
- 3. Pathogenesis and clinical manifestations of mumps.
- 4. Complications of mumps.
- 5. Treatment of mumps.
- 6. Principles of prophylaxis of mumps.
- 7. Etiological factor of pertussis.
- 8. Classification of pertussis.
- 9. Pathogenesis and clinical manifestations of pertussis.
- 10. Treatment of pertussis.
- 11. Principles of prophylaxis of pertussis.

A student must be able:

1. To follow the basic rules of work with a patient sick with ARD.

2. To take anamnesis with the estimation of epidemiology information (taking into account seasonality, origin of febricities, polymorphism of clinical signs of illness).

3. To examine a patient and reveal the basic clinical signs of illness.

4. To represent information of anamnesis and objective inspection in a hospital chart and formulate the preliminary diagnosis.

- 5. To write a plan of examination.
- 6. To write a clinical diagnosis (form of disease, type, severity, course of disease).

7. To prescribe the treatment taking into account age, severity of illness.

8. To write out a prescription.

9. To organize disease measures in the hearth of infection (to find out the source of infection, fill an urgent report in SES, to set a quarantine, to define the circle of contact persons, conduct them bacteriological inspection).

10. To write epicrisis with the estimation of development of illness, results of inspection, efficiency of treatment, prognosis, by recommendations for a subsequent supervision or treatment depending on the form of ARD.

- 11. Perform diagnostic options in patient with ARD.
- 12. Make differential diagnosis.
- 13. Interpret data of laboratory studies.

Educational aims of the study

- forming the deontological presentations, skills of conduct with the patients,

- to develop deontological presentations, be able to carry out deontology approach to the patient,

- to develop the presentations of influence of ecological and socio-economic factors on the state of health,

- to develop sense of responsibility for a time illness and loyalty of professional actions,
- to be able to set psychological contact with a patient and his family.

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3. 2. Infant and Young Child Nutrition (0–23 months) : recommendations [Текст] / О. V. Katilov, A. V. Varzar', O. Yu. Belousova etc. — Vinnytsia : Nova Knyha, 2019. — 64 p.

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• Study Guide for Practical Work of Students

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for foreign students 6 course medical institute with

English form of education

Topic: "Differential diagnosis of neuroinfections in children".

Course VI

English-speaking Students' Medical Institute

Educative aims of the study.

To facilitate:

The formation of deontology concepts and practical skills related to patients with acute infections of CNS.

To acquire the skills of psychological contact establishment and creation of trusting relations between the doctor and the patient and his parents.

The development of responsibility sense for timeliness and completeness of patient's investigation. *A student should be able to:*

Perform diagnostic options in patient with acute infections of CNS. Make differential diagnosis. Interpret data of laboratory studies.

Students should be given knowledge about symptomatic, diagnosis and treatment of acute infections of central nervous system (CNS).

A student should know:

Etiological factors of common acute infections of CNS. Pathogenesis and clinical manifestations of acute infections of CNS. Common complications of acute infections of CNS. Diagnostic of acute infections of CNS and its complication. Specific diagnostic. Differential diagnostic of acute infections of CNS. Treatment of acute infections of CNS. Principles of prophylaxis. Specific prophylaxis. Vaccination.

Acute infection of the central nervous system (CNS) is the most common cause of fever associated with signs and symptoms of CNS disease in children. Infection may be caused by virtually any microbe, the specific pathogen being influenced by the age and immune status of the host and the epidemiology of the pathogen. In general, viral infections of the CNS are much more common than bacterial infections, which in turn are more common than fungal and parasitic infections. Infections caused by rickettsiae (e.g., Rocky Mountain spotted fever and Ehrlichia) are relatively uncommon but assume important roles under certain epidemiologic circumstances. Mycoplasma spp also can cause infections of the CNS, although their precise contribution often is difficult to determine.

Regardless of etiology, most patients with acute CNS infection have similar clinical syndromes. Common symptoms include headache, nausea, vomiting, anorexia, restlessness, and irritability. Unfortunately, most of these symptoms are quite nonspecific. Common signs of CNS infection, in addition to fever, include photophobia, neck pain and rigidity, obtundation, stupor, coma, seizures, and focal neurologic deficits. The severity and constellation of signs are determined by the specific pathogen, the host, and the anatomic distribution of the infection. The anatomic distribution of infection may be diffuse or focal. Meningitis and encephalitis are examples of diffuse infection. Meningitis implies primary involvement of the meninges, whereas encephalitis indicates brain parenchymal involvement. Because these anatomic boundaries are often not distinct, many patients have evidence of both meningeal and parenchymal involvement and should be considered to have meningoencephalitis. Brain abscess is the best example of a focal infection of the CNS. The neurologic expression of this infection is determined by the site and extent of the abscess(es). The diagnosis of diffuse CNS infections depends on careful examination of cerebrospinal fluid (CSF)

obtained by lumbar puncture (LP).

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English form of education

Topic: "Emergency conditions in neuroinfections in children".

Course VI

English-speaking Students' Medical Institute

1. Background.

Acute infection of the central nervous system (CNS) is the most common cause of fever associated with signs and symptoms of CNS disease in children. Infection may be caused by virtually any microbe, the specific pathogen being influenced by the age and immune status of the host and the epidemiology of the pathogen. In general, viral infections of the CNS are much more common than bacterial infections, which in turn are more common than fungal and parasitic infections. Infections caused by rickettsiae (e.g., Rocky Mountain spotted fever and Ehrlichia) are relatively uncommon but assume important roles under certain epidemiologic circumstances. Mycoplasma spp also can cause infections of the CNS, although their precise contribution often is difficult to determine.

Regardless of etiology, most patients with acute CNS infection have similar clinical syndromes. Common symptoms include headache, nausea, vomiting, anorexia, restlessness, and irritability. Unfortunately, most of these symptoms are quite nonspecific. Common signs of CNS infection, in addition to fever, include photophobia, neck pain and rigidity, obtundation, stupor, coma, seizures, and focal neurologic deficits. The severity and constellation of signs are determined by the specific pathogen, the host, and the anatomic distribution of the infection. The anatomic distribution of infection may be diffuse or focal. Meningitis and encephalitis are examples of diffuse infection. Meningitis implies primary involvement of the meninges, whereas encephalitis indicates brain parenchymal involvement. Because these anatomic boundaries are often not distinct, many patients have evidence of both meningeal and parenchymal involvement and should be considered to have meningoencephalitis. Brain abscess is the best example of a focal infection of the CNS. The neurologic expression of this infection is determined by the site and extent of the abscess(es).

The diagnosis of diffuse CNS infections depends on careful examination of cerebrospinal fluid (CSF) obtained by lumbar puncture (LP).

1. Primary aims of the study.

Students should be given knowledge about symptomatic, diagnosis and treatment of acute infections of central nervous system (CNS) and their complications.

A student should know:

- 1. Etiological factors of common acute infections of CNS.
- 2. Pathogenesis and clinical manifestations of acute infections of CNS.
- 3. Common complications of acute infections of CNS.
- 4. Diagnostic of acute infections of CNS and its complication. Specific diagnostic.
- 5. Differential diagnostic of acute infections of CNS.
- 6. Treatment of acute infections of CNS.
- 7. Neurotoxicosis. Tactics of patient management and emergency care.
- 8. Leading clinical symptoms of infectious-toxic shock (ITS) in meningococcal infection in children.
- 9. Patient management tactics and emergency care in ITS.
- 10. Principles of prophylaxis. Specific prophylaxis. Vaccination.

A student should be able to:

- 1. Perform diagnostic options in patient with acute infections of CNS.
- 2. Make differential diagnosis.
- 3. Interpret data of laboratory studies.
- 4. Perform first aid and step-wise treatment depends on stage of care.

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- 1. Pediatric Infectious Diseases [Текст] : textbook / S. O. Kramarev, O. B. Nadraga, L. V. Pipa etc. 4-th edition. Kyiv : AUS Medicine Publishing, 2020. 240 p. + Гриф MO3.
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for foreign students 6 course medical institute with

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Topic: "Differential diagnostic acute intestinal diseases in children"

Course VI

English-speaking Students' Medical Institute

The theme urgency

Acute intestinal diseases (AII) are a leading cause of mortality and morbidity in the young children. The diagnosis and differential diagnosis of AII in the children of early age are very difficult, because clinical symptoms of initial period of these diseases have similar displays. Duration and consequences of disease are depended from a timeliness and adequacy of the appointed therapy of AII.

Adequate and timely antiepidemic measures can prevent the spread of disease in the child's collectives (include a «hospital» way of transmission).

That is why doctor must know about course of AII and principles of rational therapy.

The aim of the study: to teach students on the basis of information of anamnesis of illness, epidanamnesis and clinical displays diagnose GKI in the children of early age, to make a differential diagnosis and antiepidemic measures in the nidus of infection.

A student must know:

- 1. Etiologic structure and epidemiology features of AII in the children of early age.
- 2. Features of diagnostics of syndromes of AII (gastritis, enteritis, enterocolitis, gastroenteritis, gastroenterocolitis) and their accordance of the nosology forms of AII.
- 3. Clinical features of AII depending on age, methods of laboratory diagnostics of AII.
- 4. Differential diagnostics of AII (dysentery, salmonellosis, escherichiosis, yersiniosis, rotaviral infection) in the children of the first three years of life.
- 5. Indications for hospitalization patients with AII.
- 6. A supervision and treatment of children with AII in the policlinic.
- 7. Indication for antibacterial therapy, principles of oral rehydration and pathogenetic therapy.
- 8. Disease measures in the hearth of AII.

A student must be able:

- 1. To adhere to the basic rules of work near a bed of sick with AII.
- 2. To collect anamnesis of disease, estimate epidemiology information.
- 3. To collect anamnesis of the life.

4. To examine a patient and find out the basic clinical symptoms of AII. To estimate the state of sick child, symptoms of toxicosis with dehydration, character of emptying, changes in the nervous system, cardio-vascular system, urinary system.

- 5. To ground a previous diagnosis.
- 6. To appoint the additional methods of examination and estimate their results.
- 7. To ground a final diagnosis according to the clinical classification.
- 8. To prescribe treatment taking into account etiology, pathogenesis of AII (invasion or secretory diarrhea), severity of illness.
- 9. To write the recipes on basic medicines.
- 10. To conduct disease measures in the hearth of AII.

The scheme of curatio children on the topic:

"Differential diagnostic and principles treatment acute intestinal diseases in the children"

A research object	A sequence of executions	
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		Anamnesis of disease :
	Case history, patient, parents of the patient	 A date the first signs the date of address to the doctor sequence of development of symptoms character of inspection and treatment at home Epidemiology anamnesis: A contact is with persons, which have disorders of gastroenteric highway For infants character of feeding (breastfeeding, mixed, formula) the possible use of poor quality meal, contaminated food, drink of water, from natural sources The past medical history (history of other recent infections, medications)
	Sick child, parents of the patient	 Anamnesis of life (according to general rules). Complaints. Examination of the patient: state of patient (weakness, somnolence, violation of consciousness, anxiety, excitation) temperature of body skin (a pallor, dryness, increase of humidity, «marbleness», turgor) mucous membranes (dryness of tongue, lips, scleras) the anterior fontanelle (sunken, bulging) breathing system cardio-vascular system the state of the nervous system organs of abdominal region (a form of abdomen, tension of muscles of front abdominal wall, state of intestine (is the exaggerated loops, spasm of sigma-meson, tenderness), liver, spleen)
3	Laboratory data	 To analyse: a complete blood count an analysis of urine coprograma the bacteriological analysis of feces the biochemical blood analysis serological analysis
4	A list of the medical appointments	 To learn: the features of the mode and diet a volume and character of regidration (oral, intravenous) etiotropic therapy pathogenetic therapy symptomatic therapy
5	To design a curacio letter	To include:

 Anamnesis of disease epidanamnesis the pathological symptoms and syndromes of 	
 the pathological symptoms and syndromes at of hospitalization examination sick, dynamics of pathological p treatment data of laboratory study to ground a diagnosis according to classificat to prescribe treatment, to write recipes 	the time rocess during tion
 to ground a diagnosis according to classificat to prescribe treatment, to write recipes 	tion
 to estimate the therapy of patient to define disease measures in the hearth of int 	fection

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Study Guide of Practical Work

for foreign students 6 course medical institute with

English form of education

Topic: "'Emergency conditions with acute intestinal diseases. Diagnostics. Treatment."

Course 6

Foreign Students' Medical Institute

The theme urgency

Worldwide, acute intestinal diseases (AII) remain one of the most common illnesses among children of early age. Development dehydration and neurotoxicosis cause severe conditions in the children of this age group. A doctor must know early symptoms of these emergency conditions, methods of laboratory diagnostics and principles of therapy.

The aim of the study

To learn to find out the clinical symptoms of dehydration and neurotoxicosis in the children with AII, to conduct laboratory diagnostics of these states and appoint treatment.

A student must know:

- 1. Types of diarrhea are depending on the mechanism of development and clinical displays.
- 2. Etiology, pathogenesis and clinic of invasion diarrhea in the children of early age.
- 3. Etiology, pathogenesis and clinic of secretory diarrhea in the children of early age.
- 4. Pathogenesis of dehydration.
- 5. Clinical features of different types of dehydration (isotonic, saline-deficit, watery-deficit) in the younger children.
- 6. Clinical features of different degrees of dehydration (I, II, III).
- 7. Pathogenesis of neurotoxicosis.
- 8. Clinical symptoms of neurotoxicosis in the younger children with AII.
- 9. Principles of treatment of neurotoxicosis.
- 10. Principles of treatment of dehydration.

A student must be able:

1. To examine a patient and find out clinical symptoms, what characteristic for dehydration and neurotoxicosis.

- 2. To determine a type and degree of dehydration.
- 3. To appoint additional examination.
- 4. To estimate the results of laboratory examination.
- 5. Find diagnostic clinical criterions of toxicosis with exicosis during examination of patients.
- 6. To perform differential diagnosis among diseases which have the same clinical features.
- 7. To perform prehospital and hospital treatment of children in case of toxicosis with exicosis.
- 8. On the basis of clinic-laboratory information to formulate a diagnosis.
- 9. To appoint treatment taking into account a type and degree of dehydration, neurotoxicosis.
- 10. To prescribe measures in the focus of infection

Aids and material tools: Charts "Acute bowel infections", "Toxicosis with exicosis". Student's practical activities:

I. Curation of patients with acute bowel infections in children infectious department.

- 1. Ask complaints, anamnesis and life history.
- 2. Examine the patients; find clinical features of acute bowel infection, toxicosis and exicosis.
- 3. Prescribe laboratory investigations to prove the diagnose.
- II. To perform the diagnosis:
 - 1. Make previous diagnose due to complaints, disease history, epidemiological anamnesis, clinical objective features.
 - 2. Make complete diagnose due to previous diagnose, laboratory dates, differential diagnosis.

III Provide the treatment (diet, medicine) depending on patient's age, severity of the disease.

IV Prescribe measures in the focus of infection, prevention of the disease.

V Clinical analyzing of the case.

The content of theme.

Toxic encephalopathy (neurotoxicosis) is a reaction of organism on pathogen, which is characterized neurological disorders, disorder of microcirculation, metabolism, function of heart, lights and CNS. Toxins cause disorders of microcirculation with activation centers of sympathetic nervous system

. Consequences of it are a tissue hypoxia and acidosis, which cause functional insufficiency organs and systems.

There are clinical syndromes in the acute period of toxic encephalopathy:

- is sharp excitation, motiveless monotonous scream
- dizziness, tonic-colonic seizures
- rise a temperature up to $39-40^{\circ}$ C
- hemodynamic disorders: tachycardia to 180-220 per min., a pallor, cyanosis, cold extremities
- disturbance of breathing: tachypnoea, the toxic breathing
- renal disturbance: decreased urination, azotemia, proteinuria
- clinical and laboratory signs of DIC-syndrome: hemorrhage in the skin, bleeding, thromboses, a low fibrinogen concentration in blood, thrombocytopenia, increase of level of soluble fibrin, fibrinolysis
- metabolic acidosis.

Depending on correlation of defeat of different organs and systems select two basic forms of toxic encephalopathy: with predominance of neurological disorders or hemodynamic disorders.

Encephalopathy I degree characterized a motive anxiety, high temperature of body, short times seizures .

Encephalopathy II degree shows up fever, oppression of consciousness to somnolence, to sopor. A general-brain and meningeal symptoms are present. Seizures are possible. A tachypnoea, tachycardia, oliguria are characteristic.

Encephalopathy III degree is characterized seizures with disorders of breathing and cardiac activity. There are pallor and total cyanosis, muscular hypotonia, tachycardia or bradicardia with the signs of heart failure, displays of DIC-syndrome. Urine output is decreased significantly.

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Study Guide of Practical Work

for foreign students 6 course medical institute with

English form of education

Topic: "Differential diagnosis of viral hepatitis in children. Differential diagnosis of typical and atypical forms of VH of various etiologies in children. Emergency conditions with viral hepatitis (VH) in children.""

Course 6

Foreign Students' Medical Institute

The theme urgency

Viral hepatitis occupy the third place in the structure of children infectious morbidity after ARVI and acute intestinal diseases. Successes in diagnostics of viral hepatitis are a powerful stimulus for the decision of questions of pathogenesis, treatment and prophylaxis. From these positions important understanding of variety of clinical variants of disease and correct estimation clinic-laboratory dates for establishment of final diagnosis and subsequent medical tactic. A differential diagnostics of viral hepatitis with other infectious and somatic diseases are very actually.

The aim of the study

Purpose of employment: to teach students on the basis of anamnesis of illness, epidanamnesis and clinic-laboratory dates to conduct differential diagnostics of viral hepatitis with the jaundices of other etiology, in time to diagnose development of the emergency medical conditions.

Basic level:

- 1. To know how to ask complaints, disease history, life history in children (Propedeutic pediatrics)
- 2. To perform the clinical examination of the child (Propedeutic pediatrics).
- 3. To know microbiology, pathophysiology, pathomorphology, of viral hepatite (microbiology, pathophysiology, pathomorphology).
- 4. To diagnose viral hepatitis after clinical and laboratory examination (infection diseases, propedeutic pediatrics, microbiology, pathophysiology, biochemistry).
- 5. To give etiological, pathogenetical, symptomatical treatment (pharmacology).

A student must know:

1. Clinical features of viral hepatitis in the children in the different periods of disease depending on etiology.

2. Differential diagnostics of viral hepatitis in the children in the pre- icteric period.

3. Differential diagnostics of viral hepatitis in the children in an icteric period.

4. Differential diagnostics of jaundices

5. Complication of viral hepatitis in the children, clinical signs of the emergency medical conditions, principles of treatment.

6. Leading clinical symptoms, data of laboratory and instrumental studies in different clinical variants and depending on the causative agent of VH.

7. Differential diagnosis of typical and atypical forms of hypertension in children.

8. Tactics of managing a patient with viral hepatitis.

9. Anti-epidemic measures in the focus of infection.

10. Leading clinical symptoms of acute liver failure in children with hypertension.

11. Indicators of laboratory and instrumental studies in assessing the degree of severity and prognosis of the course of VH with acute liver failure syndrome.

12. Tactics of management of a patient with hypertension with acute liver failure syndrome. Providing emergency care.

A student must be able:

1. To adhere to the basic rules of work near a bed sick with viral hepatitis.

2. To collect anamnesis of disease.

3. To collect the directed epidemiology anamnesis.

4. To do the clinical examination of child, find out syndromes and symptoms of disease, which specific to viral hepatitis.

5. To set a clinical diagnosis.

6. To work out a plan of examination (clinic, biochemical, serum researches, able them to estimate) for clarification of diagnosis.

7. To conduct the differential diagnosis of viral hepatitis with diseases which are accompanied an jaundice.

8. To diagnose the emergency medical conditions in the children with viral hepatitis.

Educate aims: question of deontology during work with patients with viral hepatitis.

Interdisciplinary integration.

A student must know:

- 1. Laboratory methods of diagnostics of jaundice.
- 2. Laboratory methods of diagnostics of viral hepatitis (serum, biochemical).
- 3. Semiotics of the liver diseases.
- 4. Physiopathology of liver (metabolic, protective functions of liver, produces and excretes bile). A student must be able:
- 1. To conduct inspection sick with the syndrome of jaundice.
- 2. To appoint laboratory examination a patient with an jaundice.

3. To estimate information of laboratory researches (global analysis of blood, urine, biochemical indexes of blood).

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Study Guide of Practical Work

for foreign students 6 course medical institute with

English form of education

Topic: "Differential diagnosis of influenza and SARS in children."

"Emergency conditions during influenza and SARS in children."

Course 6

Foreign Students' Medical Institute

I. The theme urgency.

Acute respiratory viral infections (ARVIs) are the most common infectious illnesses in the general population. Synonym of ARVI is Upper Respiratory Tract Infection (URTI or URI). ARVI are the leading reasons for people missing work or school, and they represent the leading acute diagnosis in the office setting. Separately, ARVIs rarely cause permanent complications or death, although ARVIs may serve as a gateway to infection of adjacent structures, resulting in otitis media, bronchitis, bronchiolitis, pneumonia, sepsis, meningitis, intracranial abscess, and other infections. Serious complications may result in clinically significant morbidity and rare deaths.

Influenza or Flu is an acute respiratory disease of viral etiology (ARVI), which is characterized by expressed symptoms of intoxication and affection of the upper respiratory tracts, first and foremost the trachea. Influenza viruses also can cause pandemics, during which rates of illness and death from influenza-related complications can increase dramatically worldwide. Influenza viruses cause disease among all age groups. Rates of infection are highest among children, but rates of serious illness and death are highest among persons aged >65 years and persons of any age who have medical conditions that place them at increased risk for complications from influenza.

Basic level

- 1. To know how to ask complaints, history of the disease and life in children [propedeutic pediatrics].
- 2. To perform clinical examination of the child [propedeutic pediatrics].
- 3. To know microbiology, pathophysiology, pathomorphology and clinical features of Influenza, upper respiratory viral infections, diphtheria, whooping cough, measles, chickenpox [Microbiology, pathophysiology, and pathomorphology, Children infectious diseases].
- 4. To diagnose croup syndrome after clinical, laboratory and instrumental examination of sick person [infection diseases, propedeutic pediatrics, microbiology, and pathophysiology].
- 5. To give etiological, pathogenetical and symptomatical treatment of croup syndrome [pharmacology].
- 6. To prevent diseases that may be complicated by croup syndrome.

Primary aims of the study.

To teach students major methods of acute respiratory infection diagnosis and treatment. *A student should know:*

- 1. Etiological factors of common upper respiratory tract infections (influenza incl.).
- 2. Syndromes specific manifestation of ARVIs (rhinitis, pharyngitis, laryngitis, laryngitis).
- 3. Pathogenesis and clinical manifestations of ARVIs.
- 4. Common complications of ARVIs.
- 5. Diagnostic of ARVI and its complication. Specific diagnostic.
- 6. Treatment of ARVIs. Specific treatment of influenza.
- 7. Principles of prophylaxis. Specific prophylaxis. Vaccination.
- 8. Differential diagnosis of influenza and SARS in children.
- 9. Differential diagnosis of influenza, parainfluenza, and corona virus infection, etc.
- 10. Pandemic influenza, its epidemiological and clinical-pathogenetic features.
- 11. Differential diagnosis of adenovirus, respiratory syncytial (RS), rhinovirus, pneumometavirus infection, etc.
- 12. The leading clinical symptoms of emergency conditions observed in influenza and ARVI (hyperthermic syndrome and acute stenotic laryngotracheitis syndrome).
- 13. Tactics of managing patients with influenza and SARS. Emergency care in emergency situations.
- 14. Clinical picture and management tactics of patients with febrile convulsions.
- 15. Reye's syndrome in children, clinic, diagnosis, treatment.

A student should be able to:

- 1. Perform diagnostic options in patient with ARVIs.
- 2. Make differential diagnosis.

3. Interpret data of laboratory studies.

Educative aims of the study.

To facilitate:

- 1. The formation of deontology concepts and practical skills related to patients with ARVIs.
- 2. To acquire the skills of psychological contact establishment and creation of trusting relations between the doctor and the patient and his parents.
- 3. The development of responsibility sense for timeliness and completeness of patient's investigation.

Student's practical activities:

I. To perform the diagnosis:

- 1. Ask complaints, anamnesis and life history.
- 2. Examine the patients, find clinical features of disease
- 3. Make diagnose due to clinical and laboratory dates.

II Provide the treatment of croup syndrome and prevention of diseases that may be complicated by croup syndrome.

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Study Guide of Practical Work

for foreign students 6 course medical institute with

English form of education

Topic: "Immunoprophylaxis of infectious diseases.

Vaccination."

Course 6

Foreign Students' Medical Institute

Aim: to know how to prescribe measures in the foci of different infections (nonspecific prevention), specific prevention of children infectious diseases according to the immunization schedule.

Professional motivation: Protection from infectious disease is referred to immunity. That's why immune prophylaxis is the most potential method of infectious diseases prevention. World experience shows that potential risk of postimmunization reactions and complications is very low. And risk of infectious diseases' complications and mortality really overweight them. Ambulatory pediatrician plays the main role in immune prophylaxis program. Organization of immune prophylaxis is the main prophylaxis is the ambulatory pediatrician.

Basic level

- 1. Epidemiological peculiarities of "controlled" infections: mumps, measles, rubella, diphtheria, pertussis, poliomyelitis, tetanus, viral hepatitis [microbiology, children infectious diseases].
- 2. Immunization schedule [children infectious diseases].

Students' independent study program.

1. Objectives for students' independent studies.

You should prepare for the practical class using the existing textbook and lectures. Special attention should be paid to the following:

The immunoprophylaxis task is management by immunological answer to prevent the disease beside separate persons and groups of the population.

The ways of the immunoprophylaxis:

Active - stimulation of own antibodies production, Passive - introduction of ready antibodies.

Vaccinal preparations characteristic

- 1. Vaccines, which include complete killed microorganisms (pertussis, typhoid, cholera) or inactivated viruses (influenza, poliomyelitis Salk vaccine)
- 2. Anatoxins, which contains inactivated toxin of the bacteria (diphtheria, tetanus)
- 3. The vaccines from alive attenuated viruses (measles, mumps and others.)
- 4. Vaccines, which contains crossing alive microorganisms (BCG)
- 5. Chemical vaccines from fraction of killed microorganisms (pneumococcal, meningococcal)
- 6. Gene-engineering recombinant, chemical synthesized (hepatitis B, influenza)
- 7. Associated (in composition of which enters several vaccines)

Composition of vaccines:

- 1. Active or immunizing antigens
- 2. Fluid base
- 3. Preservatives, stabilizers, antibiotics
- 4. Auxiliary facilities

Ways of the vaccination

- 1. Intramuscular (DTP, DT, DT-M, antirhabic, meningococcal B)
- 2. Subcutaneous (measles, mumps, rubella, meningococcal A+C)
- 3. Intracutaneous (BCG)
- 4. On skin (plague, tularemia, brucellosis)
- 5. Peroral (poliomyelitis)
- 6. Intranasal (Influenza, inactivated)

Aids and material tools: Charts "Immunization schedule".

Student's practical activities:

- 1. Writing of individual Immunization schedule to healthy children.
- 2. Writing of individual Immunization schedule to children in case of contraindications, late immunization and other problems.
- 3. Prescribe epidemiological measures in the focus of infection, specific prevention of the disease.
- 4. Diagnosing, treatment and prevention of postimmunization reactions and complications.

Students must know:

- 1. Recommended immunization schedule for infants and children.
- 2. Ukrainian immunization schedule.
- 3. DTP Vaccine: characteristics, immunization schedule, risks, contraindications.
- 4. MMR vaccine: characteristics, recommendations, precautions and contraindications, adverse reactions.
- 5. Polio vaccine: characteristics, immunization schedule, risks, contraindications.
- 6. Varicella zoster (chicken pox) vaccine: characteristics, immunization schedule, risks, contraindications. Varicella-zoster immune globulin.
- 7. Hepatitis B virus vaccine: characteristics, immunization schedule, risks, contraindications.
- 8. Hepatitis A virus vaccine: characteristics, indications, contraindications, side effects.
- 9. Influenza vaccine: characteristics, immunization schedule, risks, contraindications.
- 10. Normal postimmunization reactions and complications: clinical features, treatment prevention.
- 11. Epidemiological measures in the focus of infection.
- 12. Specific passive prevention of diseases by immune globulin.

Student should be able to:

- 1. Write individual Immunization schedule to healthy children.
- 2. Write individual Immunization schedule to children in case of contraindications, untime immunization and other problems.
- 3. Prescribe epidemiological measures in the focus of infection, specific prevention of the disease by immune globulin.
- 4. Diagnose, treat and prevent of postimmunization reactions and complications.

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TOPIC 24

LIST OF PRACTICAL SKILLS LEARNING OF WHICH IS CONTROLLED AT FINAL MODULAR CONTROL

- I. Analysis of laboratory and instrumental investigations
 - 1. Clinical analysis of blood
 - 2. Clinical analysis of urine
 - 3. Clinical analysis of liquor
 - 4. Coprological research
 - 5. Serological reaction to infectious diseases
 - 6. Bacteriological study of biological fluids and excretions
 - 7. Immunological markers of infectious diseases
 - 8. Blood bilirubin and its fractions
 - 9. Alkaline phosphatase, tymol test, transaminases
- II. Providing care in emergency conditions:
- 1. Diphtheria croup
- 2. Apnea in pertussis
- 3. Infectious-toxic shock in meningococcal infection
- 4. Edema-swelling of the brain in meningitis and encephalitis
- 5. Toxico-eksycosis acute intestinal infections
- 6. Neurotoksicosis in acute intestinal infections
- 7. Acute liver failure in viral hepatitis
- 8. Acute stenotic laryngotracheitis in ARVI
- 9. Syndrome of hyperthermia in flu
- 10. Febrile convulsions in flu
- 11. Anaphylactic shock on vaccination

TOPIC 25

LIST OF QUESTIONS TO FINAL MODULAR CONTROL

CHILDREN'S INFECTIOUS DISEASES

1. Measles. Clinic of typical and atypical forms. Complications. Differential diagnosis. Treatment. Prevention.

2. Rubella. Differential diagnosis of acquired and congenital rubella. Treatment. Prevention.

3. Chicken pox. The clinical course of typical and atypical forms of varicella. Complications.

Differential diagnosis. Treatment, prevention.

4. Herpes zoster. Diagnosis. Differential diagnosis. Treatment. Prevention.

5. Herpetic infection (herpes simplex). Clinical form. Differential diagnosis. Treatment. Prevention.

6. Scarlet fever. The clinical picture of typical and atypical forms. Complications. Differential diagnosis. Treatment. Prevention.

7. Tonsillitis in children. Etiological features depending on age. Clinic. Diagnosis. Differential

diagnosis. Treatment. Treatment tactic for patients with sore throats at home.

8. Pseudotuberculosis. Differential diagnosis. Treatment, prevention.

9. Diphtheria. Clinical form. Complications. Differential diagnosis. Treatment of diphtheria.

10. Diphtheritic laryngotracheitis. Clinic. Differential diagnosis of the true (diphtheritic) and false croup. Emergency aid.

11. Infectious mononucleosis. Differential diagnosis. Treatment. Prevention.

12. Pertussis. Peculiarities in infants. Complications. Differential diagnosis. Prophylactic treatment.

13. Apnea form of whooping cough. Clinical and pathogenetic features. Prevention of stops

breathing episodes in children with whooping cough. Emergency aid in apnea.

14. Mumps infection. The clinical picture of various forms of epidemic parotitis (mumps,

submaxillitis, pancreatitis, orchitis, meningitis, etc.). Differential diagnosis. Treatment. Prevention. 15. Meningococcal infection. Clinical form. Peculiarities in children of 1st year of life. Differential diagnosis of meningococcemia. Treatment. Prevention.

16. Infectious-toxic shock in meningococcemia. Diagnosis. Emergency aid.

17. Bacterial and viral meningitis in children. Clinical features depending on the age of the child. Differential diagnosis. Treatment. Prevention.

18. Encephalitis in children. Etiologic structure. Clinical features. Laboratory and instrumental diagnosis. Differential diagnosis. Treatment. Prevention.

19. Edema-swelling of the brain in meningitis and encephalitis in children. Diagnosis. Emergency aid.

20. Poliomyelitis. Clinical form. Differential diagnosis. Treatment. Prevention.

21. Enteroviral infection. Clinical form. Differential diagnosis. Treatment. Prevention.

22. Shigellosis in children. Peculiarities in different age groups. Differential diagnosis. Treatment. Prevention.

23. Salmonellosis in children. Peculiarities in different age groups. Differential diagnosis. Treatment. Prevention.

24. E.coli infection in children. Clinical features in children of different age groups depending on the pathogen. Differential diagnosis. Treatment. Prevention.

25. Acute intestinal infections in newborns. Etiologic structure. Clinical features. Differential diagnosis. Treatment. Prevention.

26. Intestinal yersiniosis. Peculiarities in children of different ages. Differential diagnosis. Treatment. Prevention.

27. Rotaviral infection. Differential diagnosis. Treatment. Prevention.

28. Toxico-eksicosis at acute intestinal infections. Etiologic structure. Types of eksicosis. Clinical and laboratory diagnosis. Emergency aid.

29. Neurotoksicosis at acute intestinal infections. Etiologic structure. Clinical and laboratory diagnosis. Emergency aid.

30. Viral hepatitis A. Differential diagnosis. Treatment. Prevention.

31. Viral hepatitis B. Peculiarities in infants. Differential diagnosis and treatment. Prevention.

32. Features and diagnosis of viral hepatitis C, D, E and other children. Differential diagnosis. Treatment. Prevention.

33. Acute liver failure in viral hepatitis in children. Clinical and laboratory diagnosis. Emergency aid.

34. Influenza. Clinical course. Features in infants. Complications. Differential diagnosis. Treatment. Prevention. Emergency aid at convulsive syndrome and hyperthermia.

35. Pandemic influenza. Features and hospital epidemiology at the present stage. Complications. Differential diagnosis. Treatment. Prevention.

36. Parainfluenza. Features of clinical manifestations. Differential diagnosis. Treatment. Prevention.37. Acute stenotic laryngotracheitis at ARI in children. Diagnosis. Differential diagnosis with true croup. Emergency aid.

38. Respiratory syncytial infection in children. Features of clinical manifestations. Differential diagnosis. Treatment, prevention.

39. Adenoviral infection. Peculiarities in infants. Differential diagnosis. Treatment. Prevention. 40. HIV / AIDS in children. Clinic. Diagnosis. Differential diagnosis. Treatment. Prevention.

40. HTV / AIDS in children. Child: Diagnosis. Differential diagnosis. Treatment. Prevention. 41. TORCH-infections: toxoplasmosis, rubella, cytomegalovirus infection, herpetic infection.

Clinical manifestations of congenital and acquired forms depending on the route and time of infection. Laboratory diagnosis of acute, latent and reactivated forms. Principles of treatment and prevention.

42. Immunoprophylaxis of children's infectious diseases. The organization of preventive vaccinations for children. Contraindications to vaccination. Vaccination reactions and complications, their diagnosis and treatment.

43. Anaphylactic shock due to vaccination. Diagnosis, emergency aid.