

**Methodical development
practical lesson in the discipline "Children's infectious diseases"**

Topic: Viral hepatitis A, B, C, D.

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

Purpose: to learn to collect anamnesis and epidatamnesis in patients with viral hepatitis, as well as with jaundice syndrome, examine a patient with this pathology, determine diagnostic criteria, forms and severity of the disease, identify and characterize complications, prescribe treatment, conduct dispensary observation of convalescent women in the polyclinic , organize anti-epidemic measures in the center, plan preventive measures to prevent infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- Etiological structure, epidemiology of viral hepatitis;
- The main links of the pathogenesis of viral hepatitis in children of the 1st year of life;
- Clinical classification of viral hepatitis, severity criteria;
- Features of the clinic of viral hepatitis in children of the 1st year of life;
- Diagnostic criteria of viral hepatitis;
- Features of the course, consequences and complications of viral hepatitis in children of the 1st year of life;
- Laboratory and instrumental methods of diagnosis of viral hepatitis;
- Malignant form of viral hepatitis B in children of the 1st year of life;
- Diagnosis of the malignant form of viral hepatitis in children of the 1st year of life;
- Basic principles of therapy for patients with viral hepatitis;
- Carrying out intensive therapy for the malignant form of viral hepatitis in children of the 1st year of life;
- Criteria for discharge of convalescents from the hospital;
- Measures to prevent viral hepatitis.

Be able:

- To comply basic rules work near beds infectious the patient rightto place

- patients in inpatients;
- to collect anamnesis diseases and find out epistitution ;
- At examinations the patient with jaundice reveal in him characteristic signs forviral hepatitis;
- to fold plan auxiliary methods examination for confirmation diagnosis;
- Conduct pick up of blood for biochemical, immunological, serological research;
- Justify clinical diagnosis in accordance to classification with taking into account clinical andlaboratory data, evaluate weight process;
- Assign to the patient treatment, considering him age and weight process
- Draw plan anti-epidemic measures in cell infections;
- Write recipes on the main ones drugs, which assigned the patient;

Tests to determine the basic level of knowledge:

1 The gates of the liver include: 1) Hepatic artery, 2) Common hepatic duct, 3) Portal vein, 4) Lymphatic vessels:

- A All answers are correct.
- B Correct answers 1,3.
- C Correct answers 2,4.
- D Correct answers 1,4.

2 Hepatitis can be caused by all the listed viruses, except:

- A Herpes simplex virus.
- B human cytomegalovirus.
- C of the infectious mononucleosis virus.
- D Influenza virus.
- E Hemorrhagic fever viruses.

3 The main mechanism of pathogenesis of viral hepatitis is:

- A Violation of pigment metabolism.
- B Direct cytopathogenic effect of the virus on the hepatocyte.
- C Development of allergic reactions.
- D Cytolysis of hepatocytes depends on the immune response.

4 The main biological sign of cytolysis of hepatocytes is:

- A Hypoalbuminemia.
- B Decrease in the number of beta-lipoproteins.
- C Increase in the content of bilirubin in the blood.
- D Increase in the activity of ALT and AST.
- E Hypoprothrombinemia.

5 Which symptom of viral hepatitis is a clinical sign of cholestasis:

- A Nausea, vomiting.
- B Decrease in daily diuresis .
- C Edema, ascites.
- D Asthenic manifestations.
- E Itching of the skin.

6 Biochemical signs of cholestasis do not include an increase in blood:

- A Cholesterol.

- B Activities of ASAT.
- C Phospholipids.
- D Bile acids.
- E Activities of LF, GGTP.

7 What biochemical indicator is a manifestation of hemolysis of erythrocytes?

- A Increase in the content of aminotransferases.
- B Decrease in prothrombin index.
- C Increase in the level of indirect bilirubin.
- D Increase in hemoglobin content in plasma.

8 An increase in the size of the liver is not characteristic of:

- And giardiasis.
- In Dysentery.
- With Leptospirosis.
- D Brucellosis.
- E Yersiniosis.

9 In which protozoan infection is liver damage noted:

- And Malaria.
- In Amebiasis.
- C Toxoplasmosis.
- D All answers are correct.

10 What blood diseases are not characterized by liver enlargement?

- A Lymphogranulomatosis.
- In Aplastic anemia.
- C Acute and chronic leukemia.
- D Erythremia.
- E Hemoblastosis.

11 In which helminthiasis does the causative agent parasitize in the liver tissue or in the bile ducts?

- And echinococcosis.
- In Fasciolosis.
- With Opisthorchosis.
- D Schistosomatosi.
- E All answers are correct.

12 In which systemic disease of the connective tissue, liver damage is noted:

- A Nodular periarteritis.
- In Systemic scleroderma.
- C Systemic lupus erythematosus.
- D All answers are correct.

13 Hepatitis A virus refers to:

- A Hepadnaviruses
- B Myxoviruses.
- C Retroviruses.

- D Arboviruses.
- E Enteroviruses (picornaviruses).

14 The hepatitis A virus is not characterized by:

- A Relatively resistant to chlorine.
- B Has reverse transcriptase.
- C Stable in the pH range of 3.0-9.0.
- D The genome of the virus is RNA.
- E Contains 4 structural polypeptides.

15 The growth of immunity frees the body from the hepatitis A virus:

- A After reduction of jaundice.
During 2-3 weeks of jaundice.
- C In the first week of jaundice.
- D At 4-5 weeks of jaundice.
- E In the period of convalescence .

Recommended Books:

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 МОЗ.
2. Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / O. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi. — Vinnitsia : Nova Knyha, 2020. — 440 p.
3. Methodical instructions for practical lesson on the topic "Viral hepatitis" on the discipline "Children infectious diseases" (in accordance with the conditions of the Bologna process) [Текст] : for students of specialty 222 "Medicine" of full-time training / O. I. Smiyan, T. P. Bynda, K. O. Smiian. — Sumy : Sumy State University, 2021. — 79 p.

Web-based and electronic resources

- 1 <https://www.who.int/> World Health Organization
- 2 <https://moz.gov.ua/> Міністерство охорони здоров'я України
- 3 <https://www.ecdc.europa.eu/en> European Centre for Disease Prevention and Control
- 4 <https://www.nlm.nih.gov/> U. S. National Library of Medicine
- 5 <https://pubmed.ncbi.nlm.nih.gov/> PubMed
- 6 <https://www.who.int/wer/en/> Weekly Epidemiological Record
- 7 <https://www.cdc.gov/> Centers for Disease Control and Prevention

**Methodical development
practical lesson in the discipline "Children's infectious diseases"**

Topic: Shigellosis . Salmonellosis .

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

Purpose: to get acquainted with etiology, epidemiology, pathogenesis, classification. learn the basics of knowledge from the clinic of typical forms in children of different ages, complications. Get acquainted with laboratory diagnostics, principles of treatment and prevention.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process shigellosis and salmonellosis in children early age;
- features of GKI syndromes (gastritis, enteritis, enterocolitis, gastroenterocolitis) and their conformity nosological forms in children early age;
- toxicosis -exykosis (clinical and laboratory features) in children early age;
- clinical features shigellosis and salmonellosis depending from age and methods laboratory diagnostics GKI;
- differential diagnosis shigellosis and salmonellosis (gastritis, enteritis, enterocolitis, gastroenterocolitis) in children the first 3's years of life;
- indication to hospitalization;
- supervision and treatment children early age with shigellosis and salmonellosis in the conditions of a polyclinic;
- indication to antibacterial therapy;
- principles oral rehydration ;
- pathogenetic therapy;
- prevention;

Be able:

- to collect anamnesis disease and to evaluate epidemiological data;
- to spend laboratory-instrumental examination, be able interpret their data;
- justify previous diagnosis;

- to evaluate degree severity toxicosis -exycosis ;
- appoint additional research methods and to evaluate their results;
- justify final diagnosis according to clinical classifications;
- to spend differential diagnosis shigellosis and salmonellosis in children the first 3's years life;
- to fold individual plan treatment with taking into account etiology, pathogenesis shigellosis and salmonellosis (invasive or secretory diarrhea), disease severity;
- determine tactics with complicated I will run shigellosis and salmonellosis .

Tests to determine the basic level of knowledge:

1. Reduction of child mortality from acute intestinal infections can be achieved thanks to:
 - A Early identification of patients and their treatment.
 - B Hospitalization of seriously ill patients.
 - C Implementation of adequate oral and parenteral rehydration in hospital conditions.
 - D Prescribing oral rehydration at the first symptoms of an acute intestinal infection at home.
 - E All answers are correct.

- 2 . Which Shigella mainly secrete exotoxin?
 - A Large - Saxa.
 - B Boyd.
 - C Zone.
 - D Grigorieva - Shiga.
 - E Flexner.

- 3 . Shigels are:
 - A Gram-positive bacilli.
 - B Gram-negative rods.
 - C Gram-positive cocci.
 - D Gram-negative cocci.
 - E The simplest.

- 4 . Characteristics of the causative agent of dysentery:
 - A Gram-negative bacillus.
 - B Diseases are most often caused by Flexner and Sonne bacteria.
 - C Belongs to the genus Shigella.
 - D Does not form capsules and spores.
 - E All answers are correct.

- 5 One of the sources of infection in dysentery is indicated incorrectly:
 - A Patient with acute dysentery.
 - B Sick animal.
 - C Bacteriocarrier.
 - D Patient with chronic dysentery.

6. In the case of contact transmission, the maximum number of salmonellosis in children is recorded:
 - A. In the spring

- B. In winter.
- C. In summer.
- D. In autumn
- E. At all times of the year.

7. Salmonella transmission factors are not:

- A. Dried droppings of birds and animals.
- B. Eggs
- C. Blood-sucking insects.
- D. Household items contaminated with salmonella.
- E. Water.
- F. Milk and lactic acid products.
- G. Fish and fish products.

8. The main links of the pathogenesis of salmonellosis:

- A. Hemodynamic disorders.
- B. Endotoxemia.
- C. Bacteremia.
- D. Water and electrolyte losses.
- E. All answers are correct.

9. The clinic of hypoosmotic coma includes everything except:

- A. Lethargy.
- B. Weaknesses
- C. Dizziness.
- D. Hyperthermia.
- E. Clonic-tonic seizures.

10. The clinical manifestations that appear in an infant whose body weight decreases by 5-10% in 2 days include all, except:

- A. Inflamed eyes.
- B. Dying status.
- C. Loss of skin elasticity.
- D. Tachycardia.
- E. Inflamed scalp.

Recommended Books:

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 МОЗ.

2. Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / O. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi.— Vinnitsia : Nova Knyha, 2020. — 440 p.

Web-based and electronic resources

1 <https://www.who.int/> World Health Organization

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4 <https://www.nlm.nih.gov/> U. S. National Library of Medicine

5 <https://pubmed.ncbi.nlm.nih.gov/> PubMed

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7 <https://www.cdc.gov/> Centers for Disease Control and Prevention

**Methodical development
practical lesson in the discipline "Children's infectious diseases"**

Topic: Escherichia . Intestinal yersiniosis . Rotavirus infection.

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

Purpose: to get acquainted with the etiology, epidemiology, pathogenesis, classification of escherichia , intestinal yersiniosis and rotavirus infection. To learn the basics of knowledge from the clinic of typical forms of escherichia , intestinal yersiniosis and rotavirus infection in children of different ages, complications. Get acquainted with laboratory diagnostics, principles of treatment and prevention of escherichia , intestinal yersiniosis and rotavirus infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process escherichia , intestinal yersiniosis and rotavirus infection children early age;
- features of GKI syndromes (gastritis, enteritis, enterocolitis, gastroenterocolitis) and their conformity nosological forms in children early age;
- toxicosis -exykosis (clinical and laboratory features) in children early age;
- clinical features escherichia , intestinal yersiniosis and rotavirus infection, depending from age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children early age with escherichia , intestinal yersiniosis and rotavirus infection in polyclinic conditions;
- indication to antibacterial therapy;
- principles oral rehydration ;
- pathogenetic therapy;
- prevention;

Be able:

- to collect anamnesis disease and to evaluate epidemiological data;
- to spend laboratory-instrumental examination, be able interpret their data;
- justify previous diagnosis;

- to evaluate degree severity toxicosis -exycosis ;
- appoint additional research methods and to evaluate their results;
- justify final diagnosis according to clinical classifications;
- to spend differential diagnosis escherichia , intestinal yersiniosis and rotavirus infection children the first 3's years life;
- to fold individual plan treatment with taking into account etiology, pathogenesis escherichia , intestinal yersiniosis and rotavirus infection (invasive or secretory diarrhea), disease severity;
- determine tactics with complicated I will run escherichia , intestinal yersiniosis and rotavirus infection.

Tests to determine the basic level of knowledge:

1. What microorganisms cause a disease that is clinically similar to shigellosis ?
 - A. Enteropathogenic Escherichia coli (ECP).
 - B. Enterohemorrhagic Escherichia coli (EGCP).
 - C. Enterotoxigenic Escherichia coli (ETCP).
 - D. Enteroinvasive Escherichia coli (EIKP).
 - E. All answers are correct.

2. Acute diarrhea with a fever of 38°C, bloody stool with mucus, painful defecation, leukocytes in the coprogram is most characteristic of:
 - A. Enterotoxigenic Escherichia coli (ETKP).
 - B. Enteropathogenic Escherichia coli (EPKP).
 - C. Enteroinvasive Escherichia coli (EIKP).
 - D. Enterohemorrhagic Escherichia coli (EGCP).
 - E. All answers are correct.

3. Acute diarrhea in a child, accompanied by voluminous watery stools without blood and mucus, in the absence of fever, is most characteristic of:
 - A. Enteroinvasive Escherichia coli (EIKP).
 - B. Enterohemorrhagic Escherichia coli (EGCP).
 - C. Enterotoxigenic Escherichia coli (ETKP).
 - D. Enteropathogenic Escherichia coli (EPKP).
 - E. All answers are correct.

4. To which family of viruses do rotaviruses belong :
 - A. Paramyxoviridae ;
 - B. Picornaviridae ;
 - C. Reoviridae ;
 - D. Parvovirida ;
 - E. Herpesvirida .

5. The main source of rotavirus infection is:
 - A. a sick person;
 - B. convalescent ;
 - C. sick pig;
 - D. all options are correct;
 - E. all options are incorrect.

6. Mechanism of transmission of rotavirus infection:

- A. vertical;
 - B. airborne;
 - C. hemocontact ;
 - D. fecal -oral;
 - E. all options are correct.
7. Exanthema with intestinal yersiniosis :
- A. more often small-flowered ;
 - B. drainage around the joints;
 - C. usually symmetrical;
 - D. may be accompanied by itching;
 - E. all options are correct.
8. Reference diagnostic signs of intestinal yersiniosis are all except:
- A. high and prolonged fever;
 - B. gradual onset of the disease;
 - C. pronounced intoxication;
 - D. development of gastroenteritis and gastroenterocolitis ;
 - E. polyorganism of the lesion.
9. Features of intestinal yersiniosis in young children:
- A. the gastrointestinal form develops more often;
 - B. dehydration rarely develops;
 - C. occurs often at this age;
 - D. all options are correct;
 - E. all options are incorrect.
10. Features of intestinal yersiniosis in young children:
- A. is rare at this age;
 - B. there may be convulsions;
 - C. rapidly developing dehydration;
 - D. possible hemodynamic disorders;
 - E. all options are correct.

Recommended Books:

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 МОЗ.
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Web-based and electronic resources

- 1 <https://www.who.int/> World Health Organization
- 2 <https://moz.gov.ua/> Міністерство охорони здоров'я України
- 3 <https://www.ecdc.europa.eu/en> European Centre for Disease Prevention and Control
- 4 <https://www.nlm.nih.gov/> U. S. National Library of Medicine
- 5 <https://pubmed.ncbi.nlm.nih.gov/> PubMed
- 6 <https://www.who.int/wer/en/> Weekly Epidemiological Record

Methodical development
practical lesson in the discipline "Children's infectious diseases"

Topic: Poliomyelitis. Enterovirus infection.

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

Purpose: to be able to make a preliminary diagnosis, justify the tactics of individual treatment of patients with poliomyelitis, enterovirus infection and organize anti-epidemic measures in the center of infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process poliomyelitis and enterovirus infection;
- clinical features poliomyelitis and enterovirus infection depending on age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children with poliomyelitis and enterovirus infection in polyclinic conditions;
- treatment features children with poliomyelitis and enterovirus infection;
- prevention;

Be able:

- Follow the basic rules of working at the bedside of a patient with poliomyelitis and enterovirus infection.
- Identify complaints, history and physical examination of the patient, symptoms characteristic of poliomyelitis and enterovirus infection.
- Conduct individual diagnostic research and interpret these additional research methods.
- Establish a preliminary clinical diagnosis - poliomyelitis and enterovirus infection. Determine the clinical forms of the disease. Carry out differential diagnosis.
- Prescribe treatment for patients with poliomyelitis and enterovirus infection, taking into account the etiology, age of the child, premorbid background and

- severity of the disease.
- Plan and carry out primary prevention and control measures aimed at preventing the spread of poliomyelitis and enterovirus infection.
 - Apply deontological skills of communication with patients.

Tests to determine the basic level of knowledge:

1. How many types of polio viruses are there?
 - A 1.
 - B 2.
 - In 3.
 - G 4.
 - D 5.

2. The source of infection in poliomyelitis is:
 - And the patient, a virus carrier.
 - B Insects.
 - In Pets.
 - G Wild animals.
 - D Convalescent .

3. What are the main mechanisms of transmission of infection in poliomyelitis?
 - A Transmissible, fecal -oral.
 - B Fecal -oral, airborne.
 - In Transplacental , airborne.
 - Γ Contact and household.
 - D Transmissive.

4. At what age do children most often get polio?
 - And Children of the first months of life.
 - B Children under 7 years of age.
 - In Children older than 7 years.
 - D Children in adolescence.
 - D Children are not sick.

5. After the transferred poliomyelitis remains:
 - A Group-specific weak immunity.
 - B Long-term carrier of viruses.
 - In Postinfectious lifelong immunity.
 - D Short-term immunity.
 - D There is no correct answer.

6. Entrance gates for infection with poliomyelitis are:
 - A Conjunctiva.
 - B Nasopharyngeal tonsils, mucous membrane of the gastrointestinal tract.
 - In Skin.
 - D Mucous membrane of the bronchi.
 - D All answers are correct.

7. The death of which number of motoneurons leads to lethargic muscle paralysis?
 - And 1/4.
 - B 1/3.

In 1/2.
G 2/3.
D All.

8. Which part of the spinal cord is more often affected by poliomyelitis?

A In the Cervical.

B In the Thoracic.

C In the Lumbar.

D All departments are equally frequent.

9. What is most affected by poliomyelitis?

A The white matter of the spinal cord.

B Spinal ganglia.

C The posterior horns of the spinal cord.

D Meninges.

E Anterior horns of the spinal cord.

10. The incubation period of poliomyelitis lasts from:

A 1 to 5 days.

B 2 to 10 days.

C 5 to 26 days.

D 21 to 35 days.

E 21 to 45 days.

Recommended Books:

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 МОЗ.

2. Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / О. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi. — Vinnitsia : Nova Knyha, 2020. — 440 p.

3. 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. Vynda, O. G. Vasilyeva. — Електронне видання каф. педіатрії післядипломної освіти. — Sumy : Sumy State University, 2015. — 50 p.

Web-based and electronic resources

1 <https://www.who.int/> World Health Organization

2 <https://moz.gov.ua/> Міністерство охорони здоров'я України

3 <https://www.ecdc.europa.eu/en> European Centre for Disease Prevention and Control

4 <https://www.nlm.nih.gov/> U. S. National Library of Medicine

5 <https://pubmed.ncbi.nlm.nih.gov/> PubMed

6 <https://www.who.int/wer/en/> Weekly Epidemiological Record

7 <https://www.cdc.gov/> Centers for Disease Control and Prevention

**Methodical development
practical lesson in the discipline "Children's infectious diseases"**

Topic: Meningococcal infection.

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

The goal: to be able to make a preliminary diagnosis, justify the tactics of individual treatment of patients with meningococcal infection and organize anti-epidemic measures in the focus of infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process meningococcal infection;
- clinical features meningococcal infection depending on age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children with meningococcal infection in polyclinic conditions;
- treatment features children with meningococcal infection;
- prevention of meningococcal infection;

Be able:

- Follow the basic rules of working at the bedside of a patient with meningococcal infection.
- To single out complaints, anamnesis and physical examination of the patient, symptoms characteristic of meningococcal infection.
- Conduct an individual diagnostic study and interpret these additional research methods.
- Establish a preliminary clinical diagnosis - meningococcal infection. Determine the clinical forms of the disease. Carry out differential diagnosis.
- Prescribe treatment for patients with meningococcal infection taking into account the age of the child, premorbid background and severity of the disease.
- Plan and carry out primary prevention and control measures aimed at preventing

- the spread of meningococcal infection.
- Apply deontological skills of communication with patients.

Tests to determine the basic level of knowledge:

Meningococcus virulence factors include:

- A The release of a large amount of endotoxin during the destruction of bacteria
- B The presence of a capsule
- C Production of S Ig A-protease
- D The ability to dispose of iron from transferrin
- E All answers are correct

2 Meningococcus dies outside the body:

- A Within 30 minutes
- B On dishes for 8 hours
- C During the day
- D Immediately
- E In a humid environment after 2 weeks

3 People with meningococcal infection are:

- A Persons of all age groups
- B Children of the first year of life
- C Children up to 14 years old
- D Persons aged 31 and older

4 For infection with meningococcal infection, it is important:

- A Winter-spring seasonality
- B Duration of contact
- C Indoor crowding
- D Family predisposition
- E All answers are correct

5 The source of the disease in meningococcal infection cannot be:

- A A patient with meningococemia
- B Bacteriocarrier
- C A patient with angina
- D Patient with nasopharyngitis
- E Patient with meningitis

6 With meningococcal infection, the main route of infection is:

- A Parenteral
- B Air-drop
- C Transmissive
- D Contact and household
- E Alimentary

7 The incubation period for meningococcal infection is:

- A 10-21 days
- B 2-10 days
- C 6-14 days
- D 2-4 days

E The question has not been studied

8 Localized forms of meningococcal infection do not include:

- A Acute nasopharyngitis
- B There is no correct answer
- C Acute laryngitis
- D Meningococcal carrier

is not typical for meningococcal nasopharyngitis ?

- A Fine granularity and dryness of the mucous membrane of the oropharynx
- B Bright hyperemia of the back wall of the pharynx
- C The presence of a hemorrhagic rash
- D Nasal congestion
- E Flowing of greenish mucus along the back wall of the pharynx

10 Generalized forms of meningococcal infection do not include:

- A Meningococcal uveitis
- B Meningococcal endocarditis
- C Meningococemia
- D Meningococcal nasopharyngitis
- E Meningococcal meningitis

Recommended Books:

1. Pediatric Infectious Diseases [Текст] : textbook / S. O. Kramarev, O. B. Nadruga, L. V. Pipa etc. — 4-th edition. — Kyiv : AUS Medicine Publishing, 2020. — 240 p. + Гриф МОЗ.
2. Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / O. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi. — Vinnitsia : Nova Knyha, 2020. — 440 p.

Web-based and electronic resources

- 1 <https://www.who.int/> World Health Organization
- 2 <https://moz.gov.ua/> Міністерство охорони здоров'я України
- 3 <https://www.ecdc.europa.eu/en> European Centre for Disease Prevention and Control
- 4 <https://www.nlm.nih.gov/> U. S. National Library of Medicine
- 5 <https://pubmed.ncbi.nlm.nih.gov/> PubMed
- 6 <https://www.who.int/wer/en/> Weekly Epidemiological Record
- 7 <https://www.cdc.gov/> Centers for Disease Control and Prevention

Methodical development
practical lesson in the discipline "Children's infectious diseases"

Topic: Flu.

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

The goal: to be able to make a preliminary diagnosis, justify the tactics of individual treatment of patients with influenza and organize anti-epidemic measures in the center of infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process flu;
- clinical features flu depending on age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children with flu in the clinic;
- treatment features children with flu;
- flu prevention;

Be able:

- Follow the basic rules of working at the bedside of a flu patient.
- To highlight complaints, history and physical examination of the patient, symptoms characteristic of influenza.
- Conduct individual diagnostic research and interpret these additional research methods.
- Establish a preliminary clinical diagnosis of influenza. Determine the clinical forms of the disease. Carry out differential diagnosis.
- Prescribe treatment for patients with influenza, taking into account the child's age, premorbid background and severity of the disease.
- Plan and carry out primary prevention and control measures aimed at preventing the spread of influenza.
- Apply deontological skills of communication with patients.

Tests to determine the basic level of knowledge:

1. The causative agent of influenza belongs to:
 - A Enteroviruses .
 - B Arboviruses.
 - C rotaviruses .
 - D Orthomyxoviruses .
 - E Picornaviruses .

2. The flu virus circulates among people:
 - A H1N1.
 - B H2N1.
 - C H3N1.
 - D All of the above.

3. Influenza A virus differs from other types:
 - A The content of RNA in the nucleocapsid .
 - B Belongs to orthomyxoviruses .
 - C Variability of surface antigens - hemagglutinin and neuraminidase .
 - D Induction of specific immunoglobulins .
 - E Highly contagious.

4. Which type of influenza virus is characterized by frequent changes in antigenic properties of surface proteins?
 - A Type A.
 - B Type B.
 - C Type C.

5. How often is gene drift of influenza type A virus observed?
 - A Twice a year.
 - B 1 time in 10-20 years.
 - C 1 time in 2-3 years.
 - D 1 time in 5 years.

6. What type of influenza virus is characterized by a constant antigenic structure?
 - A Type A.
 - B Type B.
 - C Type C.

7. Smaller antigenic variability is characteristic of the structure of the influenza virus type:
 - A Type A.
 - B Type B.
 - C Type C.

8. What does the drift of influenza virus genes lead to?
 - A Pandemic.
 - B Epidemics.
 - C Morbidity increase.
 - D Does not change the epidemiological situation.

9. The source of infection with influenza is:
A Convalescent .
B A sick person.
C Animals.
D Birds.
E Carrier.
10. Mechanisms of influenza virus transmission:
A Transmissive.
B Drip.
C Contact.
D Food.
E Water.

Recommended Books:

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 МОЗ.
2. Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / О. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi.— Vinnitsia : Nova Knyha, 2020. — 440 p.

Web-based and electronic resources

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- 2 <https://moz.gov.ua/> Міністерство охорони здоров'я України
- 3 <https://www.ecdc.europa.eu/en> European Centre for Disease Prevention and Control
- 4 <https://www.nlm.nih.gov/> U. S. National Library of Medicine
- 5 <https://pubmed.ncbi.nlm.nih.gov/> PubMed
- 6 <https://www.who.int/wer/en/> Weekly Epidemiological Record
- 7 <https://www.cdc.gov/> Centers for Disease Control and Prevention

**Methodical development
practical lesson in the discipline "Children's infectious diseases"**

Topic: Acute respiratory viral infections (parainfluenza, adenovirus, respiratory syncytial , rhinovirus infection).

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room.

The number of hours is 2.

The goal: to be able to make a preliminary diagnosis, justify the tactics of individual treatment of SARS patients and organize anti-epidemic measures in the center of infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process SARS;
- clinical features SARS depending on age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children with ARVI in polyclinic conditions;
- treatment features children with SARS;
- SARS prevention;

Be able:

- Follow the basic rules of working at the bedside of a SARS patient.
- To single out complaints, anamnesis and physical examination of the patient, symptoms characteristic of SARS.
- Conduct individual diagnostic research and interpret these additional research methods.
- Establish a preliminary clinical diagnosis - SARS. Determine the clinical forms of the disease. Carry out differential diagnosis.
- Prescribe treatment for SARS patients taking into account the age of the child, premorbid background and severity of the disease.

- Plan and carry out primary prevention and control measures aimed at preventing the spread of SARS.
- Apply deontological skills of communication with patients.

Tests to determine the basic level of knowledge:

1. The source of infection with parainfluenza is:
 - A Sick person.
 - B Animals.
 - C Convalescent .
 - D Birds.
 - E All answers are correct.

2. Mechanism of parainfluenza transmission:
 - A Contact.
 - B Drip.
 - C Transmissive.
 - D Food.

3. Seasonality of the disease with parainfluenza:
 - A Summer.
 - B Winter-spring.
 - C Incidence is recorded throughout the year with a rise in the autumn-winter period.
 - D Autumn-winter.
 - E All answers are correct.

4. MS infection is caused by the following group of viruses:
 - A Enteroviruses .
 - B Picornaviruses .
 - C Paramyxoviruses .
 - D Rotaviruses .
 - E herpesviruses .

5. The source of MS infection is:
 - A Birds.
 - B Animals.
 - C A sick person.
 - D Convalescent .
 - E Carrier.

6. Adenovirus differs from other respiratory diseases:
 - A Mostly by airborne transmission.
 - B The highest incidence in the cold season.
 - C Highly contagious for children.
 - D Significant tropism to lymphoid tissue.
 - E Tropism to the epithelium of mucous membranes.

7. Adenovirus infection is more common among:
 - A Young children.
 - B Adults.

- C Children of the first year.
 - D Elderly people.
 - E All age groups.
8. An increase in the incidence of adenovirus infection is observed:
- A In the autumn-winter period.
 - B There is no seasonality.
 - C In the summer.
 - D In all seasons.
 - E In the spring period.
9. The family of picornaviruses does not include the group:
- A Reoviruses .
 - B Coxsackie viruses .
 - C of ESNO viruses.
 - D Rhinoviruses .
 - E Hepatitis A viruses.
10. Which of the following viruses are the most frequent etiological factors of colds:
- A Corona viruses.
 - B ECHO-viruses.
 - C Adenoviruses.
 - D Rhinoviruses .
 - E Parainfluenza viruses of the first type

Recommended Books:

1. Pediatric Infectious Diseases [Текст] : textbook / S. O. Kramarev, O. B. Nadraga, L. V. Pira etc. — 4-th edition. — Kyiv : AUS Medicine Publishing, 2020. — 240 p. + Гриф МОЗ.
2. Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / O. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi. — Vinnitsia : Nova Knyha, 2020. — 440 p.

Web-based and electronic resources

- 1 <https://www.who.int/> World Health Organization
- 2 <https://moz.gov.ua/> Міністерство охорони здоров'я України
- 3 <https://www.ecdc.europa.eu/en> European Centre for Disease Prevention and Control
- 4 <https://www.nlm.nih.gov/> U. S. National Library of Medicine
- 5 <https://pubmed.ncbi.nlm.nih.gov/> PubMed
- 6 <https://www.who.int/wer/en/> Weekly Epidemiological Record
- 7 <https://www.cdc.gov/> Centers for Disease Control and Prevention

**Methodical development
practical lesson in the discipline "Children's infectious diseases"**

Topic: Cyrus. Rubella.

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

The goal: to be able to make a preliminary diagnosis, justify the tactics of individual treatment of patients with measles and rubella, organize anti-epidemic measures in the center of infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process measles and rubella;
- clinical features measles and rubella depending on age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children with measles and rubella in polyclinic conditions;
- treatment features children with measles and rubella;
- prevention of measles and rubella;

Be able:

- Follow the basic rules of working at the bedside of a measles and rubella patient.
- The complaints , anamnesis, and physical examination of the patient are characterized by symptoms characteristic of measles and rubella.
- Conduct individual diagnostic research and interpret these additional research methods.
- Establish a preliminary clinical diagnosis - measles or rubella. Determine the clinical forms of the disease. Carry out differential diagnosis.
- Prescribe treatment for patients with measles and rubella, taking into account the child's age, premorbid background and severity of the disease.
- Plan and carry out primary prevention and control measures aimed at preventing

- the spread of measles and rubella.
- Apply deontological skills of communication with patients.

Tests to determine the basic level of knowledge:

1 The measles virus belongs to:

A Arboviruses.

B Togaviruses .

C Caliciviruses .

D Paramyxoviruses .

E Picornaviruses .

2 Choose a feature that is not characteristic of the measles virus:

A Inactivates during heating.

B Unstable in the external environment.

C Differs in the homogeneity of antigens.

D The possibility of obtaining attenuated strains.

E Resistant to ultraviolet radiation.

3 To which cells does the tropical measles virus infect?

A To the epithelial covering of the skin and mucous membranes.

B To the spiky layer of the epidermis.

C To the cells of the germinal layer.

D To the cells of the papillary layer of the dermis.

E To lymphoid and macrophage- phagocytic cells.

4 The most likely gateways for the measles virus:

A Damaged skin.

B Intestines.

C Lung.

D Tonsils.

E Conjunctiva of the eye.

5 Until what age do children have absolute immunity to measles?

A Up to 1 year.

B Up to 9 months.

C Up to 6 months.

D Up to 3 months.

E Up to 18 years old.

6 The main link in the pathogenesis of measles is:

A Virusemia .

B Toxinemia .

C Damage to the central and peripheral parts of the nervous system.

D Bacteremia .

7 Primary viremia in measles begins:

A From 3 to 4 days after the onset of the disease.

B In the last 2 days of incubation.

C From the first days of the catarrhal period.

D From the first day of the rash.

D The question has not been studied.

8 Name the main cause of skin pigmentation in measles

A Deposition of melanin in the elements of the rash.

B Formation of centers of productive inflammation.

C Deposition of hemosiderin as a result of hemorrhagic bleeding.

D Accumulation of lymphocytic and histocytic cells in the elements of the rash.

E All answers are correct.

9 What antibodies are absent in a measles patient?

A Virus neutralizing .

B Complement -binding .

C Hemagglutinating .

D Antitoxic.

E There is no correct answer.

10 What causes immunity resistance in measles?

A Persistence of the virus in the body.

B Re-meeting of the body with the virus.

C High immunogenicity of the virus.

D The issue has not been fully studied.

Recommended Books:

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 МОЗ.

2. Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / O. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi. — Vinnitsia : Nova Knyha, 2020. — 440 p.

3. Methodical instructions for practical lessons "Children infectious diseases. Measles" [Текст] : for students of specialty 7.110101 of full-time studying / O. I. Smiyan, T. P. Bynda, Iu. A. Mozgova, K. O. Smiian-Horbunova. — Sumy : Sumy State University, 2017. — 59 p.

Web-based and electronic resources

1 <https://www.who.int/> World Health Organization

2 <https://moz.gov.ua/> Міністерство охорони здоров'я України

3 <https://www.ecdc.europa.eu/en> European Centre for Disease Prevention and Control

4 <https://www.nlm.nih.gov/> U. S. National Library of Medicine

5 <https://pubmed.ncbi.nlm.nih.gov/> PubMed

6 <https://www.who.int/wer/en/> Weekly Epidemiological Record

7 <https://www.cdc.gov/> Centers for Disease Control and Prevention

**Methodical development
practical lesson in the discipline "Children's infectious diseases"**

Topic: Chicken pox. Herpes zoster.

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

The goal: to be able to make a preliminary diagnosis, justify the tactics of individual treatment of patients with chicken pox and herpes zoster, organize anti-epidemic measures in the center of infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process chicken pox and herpes zoster;
- clinical features chicken pox and herpes zoster depending on age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children with chicken pox and herpes zoster in the clinic;
- treatment features children with chicken pox and herpes zoster;
- prevention of chicken pox and shingles;

Be able:

- Follow the basic rules of working at the bedside of a patient with chicken pox and herpes zoster.
- Identify complaints, history and physical examination of the patient, symptoms characteristic of chicken pox and herpes zoster.
- Conduct individual diagnostic research and interpret these additional research methods.
- Establish a preliminary clinical diagnosis of chicken pox and herpes zoster.

- Determine the clinical forms of the disease. Carry out differential diagnosis.
- Prescribe treatment for patients with chicken pox and herpes zoster, taking into account the child's age, premorbid background and severity of the disease.
 - Plan and carry out primary prevention and control measures aimed at preventing the spread of chicken pox and herpes zoster.
 - Apply deontological skills of communication with patients.

Tests to determine the basic level of knowledge:

1. The causative agent of chicken pox belongs to:
 And the Family of Herpesviridae , genus Varicellavirus .
 In the Herpesviridae family, the Alphaherpesviridae family .
 C Family Orthomukhoviridae , genus Orthomukhovirs .
 D Family Herpesviridae , genus Varicellavirus .

2. Varicella and shingles viruses belong to:
 And Arboviruses.
 B Enteroviruses .
 C Herpes viruses.
 D Retroviruses .
 E Picornaviruses .

3. The virus of chicken pox and shingles has a tropism to:
 A Epithelial covering of the skin and mucous membranes.
 In A cell of the abaxial layer of the epidermis.
 C Cell of the papillary layer of the epidermis.
 D Lymphoid and macrophage- phagocytic cells.

4. Chickenpox and shingles virus are NOT characterized by:
 A Resistant to low temperatures.
 V Resistant to high temperatures.
 C It quickly dies under the influence of ultraviolet radiation.
 D Resistant to disinfectants.
 E Resistant to drying.

- 5 The source of infection with chicken pox and shingles is:
 A Patient with a typical form of the disease.
 B A patient with an atypical form of the disease.
 C Convalescent 5 days after the appearance of the last element of the rash.
 D Convalescent 5 days after onset of rash.

6. The main route of transmission of the chicken pox and shingles virus is:
 A Air-droplet.
 In Contact and household.
 C Parenteral.
 D Vertical (from mother to child).

7. Name an atypical transmission route for chickenpox:
 A Fecal -oral.
 B Air-drop.
 C Contact and household.

D Transplacental .

8. Chickenpox is more common in children aged:

- A Up to 1 year.
- B From 2 to 6 years.
- C From 8 to 10 years.
- D From 11 to 14 years.
- E Incidence does not depend on age.

9. The gateway for the chicken pox virus is:

- A Respiratory organs.
In the Gastrointestinal tract.
- C Skin covers.
- D Mucous membranes.
- E Blood.

10. The following are NOT important in the pathogenesis of the chicken pox virus:

- A. Penetration of the virus through the respiratory tract.
- B Viremia .
- C Lymphogenic spread of the virus.
- D Virus fixation in ectodermal tissue.
- E Toxinemia .

Recommended Books:

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 МОЗ.

2. Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / O. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi. — Vinnitsia : Nova Knyha, 2020. — 440 p.

Web-based and electronic resources

1 <https://www.who.int/> World Health Organization

2 <https://moz.gov.ua/> Міністерство охорони здоров'я України

3 <https://www.ecdc.europa.eu/en> European Centre for Disease Prevention and Control

4 <https://www.nlm.nih.gov/> U. S. National Library of Medicine

5 <https://pubmed.ncbi.nlm.nih.gov/> PubMed

6 <https://www.who.int/wer/en/> Weekly Epidemiological Record

7 <https://www.cdc.gov/> Centers for Disease Control and Prevention

Methodical development
practical lesson in the discipline "Children's infectious diseases"

Topic: Scarlet fever. Pseudotuberculosis.

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

The goal: to be able to make a preliminary diagnosis, justify the tactics of individual treatment of patients with scarlet fever and pseudotuberculosis, organize anti-epidemic measures in the center of infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process scarlet fever and pseudotuberculosis;
- clinical features scarlet fever and pseudotuberculosis depending on age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children with scarlet fever and pseudotuberculosis in polyclinic conditions;
- treatment features children with scarlet fever and pseudotuberculosis;
- prevention of scarlet fever and pseudotuberculosis;

Be able:

- Follow the basic rules of working at the bedside of a patient with scarlet fever and pseudotuberculosis.
- To single out complaints, anamnesis and physical examination of the patient, symptoms characteristic of scarlet fever and pseudotuberculosis.
- Conduct individual diagnostic research and interpret these additional research methods.

- Establish a preliminary clinical diagnosis of scarlet fever and pseudotuberculosis. Determine the clinical forms of the disease. Carry out differential diagnosis.
- Prescribe treatment for patients with scarlet fever and pseudotuberculosis, taking into account the child's age, premorbid background and severity of the disease.
- Plan and carry out primary prevention and control measures aimed at preventing the spread of scarlet fever and pseudotuberculosis.
- Apply deontological skills of communication with patients.

Tests to determine the basic level of knowledge:

1. Scarlet fever is caused by the following pathogen:
 - A Beta-hemolytic streptococcus of group A.
 - B Staphylococcus.
 - C Group B streptococcus.
 - D Alpha-hemolytic streptococcus group A.
 - E All streptococci.

2. Angina is most often caused by the following pathogens:
 - A Adenoviruses.
 - B group B streptococcus.
 - C With beta-hemolytic streptococcus group A.
 - D Staphylococci.
 - E Alpha-hemolytic streptococcus group A.

3. Group A of beta-hemolytic streptococci is characterized by:
 - A Resistance to beta- lactam antibiotics.
 - B Resistance to disinfectants.
 - C Ability to induce persistent antimicrobial immunity.
 - D The presence of a common group- specific toxin.
 - E Thermal stability.

4. Streptococcal infection can take the form of:
 - A Pharyngitis.
 - B Angina.
 - C Otitis media.
 - D Adenophlegmons .
 - E All answers are correct.

5. Ways of transmission in scarlet fever:
 - A Contact and household.
 - B Transmissible.
 - C Parenteral.
 - D Drip.
 - E All answers are correct.

6. Unlike pseudotuberculosis, the source of infection with yersiniosis can be:
 - A Synanthropic animals.
 - B Wild animals.
 - C Man.
 - D Pets.

7. The main factor in the transmission of pseudotuberculosis:

- A Meat and meat products.
- B Raw vegetables, water.
- C Milk and milk products.
- D Canned food.
- E Fish.

8. The factor of transmission of yersiniosis in children is mainly:

- A Water.
- B Meat.
- C Vegetables.
- D Fruits.
- E Milk.

9. The following are not factors in the transmission of yersiniosis:

- A Milk and milk products.
- B Meat and meat products.
- C Vegetables and fruits.
- D Canned food.

10. Pseudotuberculosis rarely affects:

- A Young children.
- B Children of preschool age.
- C Children of primary school age.
- D Children of high school age.

Recommended Books:

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 МОЗ.
2. Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / О. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi. — Vinnitsia : Nova Knyha, 2020. — 440 p.
3. Methodological instructions for practical lessons "Scarlet fever" on the discipline "Childhood infections" [Текст] : in accordance with the conditions of the Bologna process for students of specialty 222 "Medicine" of full-time training / O. I. Smiyan, T. P. Bynda, K. O. Smiian-Horbunova, O. G. Vasilyeva. — Sumy : Sumy State University, 2019. — 54 p.

Web-based and electronic resources

- 1 <https://www.who.int/> World Health Organization
- 2 <https://moz.gov.ua/> Міністерство охорони здоров'я України
- 3 <https://www.ecdc.europa.eu/en> European Centre for Disease Prevention and Control
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- 7 <https://www.cdc.gov/> Centers for Disease Control and Prevention

**Methodical development
practical lesson in the discipline "Children's infectious diseases"**

Topic: Infectious mononucleosis.

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

Purpose: to be able to make a preliminary diagnosis, justify the tactics of individual treatment of patients with infectious mononucleosis, organize anti-epidemic measures in the center of infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process infectious mononucleosis;
- clinical features infectious mononucleosis depending on age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children with infectious mononucleosis in polyclinic conditions;
- treatment features children with infectious mononucleosis;
- prevention of infectious mononucleosis;

Be able:

- Follow the basic rules of working at the bedside of a patient with infectious mononucleosis.
- To single out complaints, anamnesis and physical examination of the patient, symptoms characteristic of infectious mononucleosis.
- Conduct individual diagnostic research and interpret these additional research methods.
- Establish a preliminary clinical diagnosis of infectious mononucleosis. Determine

- the clinical forms of the disease. Carry out differential diagnosis.
- Prescribe treatment for patients with infectious mononucleosis taking into account the child's age, premorbid background and severity of the disease.
 - Plan and carry out primary prevention and control measures aimed at preventing the spread of infectious mononucleosis.
 - Apply deontological skills of communication with patients.

Tests to determine the basic level of knowledge:

- 1 The causative agent of infectious mononucleosis is:
 - A. Bacterium
 - B. Listerella
 - C. Rickettsia
 - D. Virus
 - E. Spirochaete

- 2 The causative agent of infectious mononucleosis refers to:
 - A. Herpesviruses
 - B. Enteroviruses
 - C. Togaviruses
 - D. Arboviruses
 - E. Myxoviruses

- 3 Infectious mononucleosis is caused by the human herpes virus:
 - A. Type 1
 - B. Type 2
 - C. Type 3
 - D. Type 4
 - E. Type 5

- 4 Epstein-Barr virus shows tropism to:
 - A. To all lymphoid cells
 - B. B-lymphocytes
 - C. Neutrophils
 - D. T-lymphocytes
 - E. Macrophages

- 5 The causative agent of infectious mononucleosis is capable of causing, unlike other viruses:
 - A. Cytolysis
 - B. Reproduction of affected cells

- 6 The source of infection with infectious mononucleosis can be a healthy person - a virus carrier:
 - A. So
 - B. No

- 7 The largest number of diseases caused by infectious mononucleosis is attributed to:
 - A. Summer
 - B. winter
 - C. In the spring

- D. Autumn
- E. Spring and autumn periods

8 Immunity after infectious mononucleosis:

- A. Missing
- B. Not stable
- C. Resistant
- D. Stable only in children up to 3 years old

9. A typical form of infectious mononucleosis is characterized by:

- A. Prolonged fever
- B. Acute tonsillitis, adenoiditis
- S. Polylymphadenopathy
- D. Hepatosplenomegaly
- E. +All answers are correct.

10 Infectious mononucleosis is characterized by:

- A. Nasopharyngitis , sore throat
- B. Acute onset of the disease
- C. Generalized lymphadenopathy
- D. Hepatolienal syndrome
- E. All answers are correct

Topic: Mumps infection.

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

The goal: to be able to make a preliminary diagnosis, justify the tactics of individual treatment of patients with mumps infection, organize anti-epidemic measures in the center of the infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process mumps infection;
- clinical features mumps infection depending on age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children with mumps infection in polyclinic conditions;
- treatment features children with mumps infection;
- prevention of mumps infection;

Be able:

- Follow the basic rules of working at the bedside of a mumps patient .
- To single out complaints, history and physical examination of the patient, symptoms characteristic of mumps infection.
- Conduct individual diagnostic research and interpret these additional research methods.
- Establish a preliminary clinical diagnosis of mumps infection. Determine the clinical forms of the disease. Carry out differential diagnosis.
- Prescribe treatment for patients with mumps infection taking into account the child's age, premorbid background and severity of the disease.
- Plan and carry out primary prevention and control measures aimed at preventing the spread of mumps infection.
- Apply deontological skills of communication with patients.

Tests to determine the basic level of knowledge:

1. The causative agent of mumps infection belongs to the family:
 - A. Paramyxoviridae ;
 - B. Picornaviridae ;
 - C. Reoviridae ;
 - D. Parvovirida ;
 - E. Herpesvirida .

2. The causative agent of mumps infection is characterized by everything except:
 - A. volatile;
 - B. homogeneous in antigenic structure;
 - C. sensitive to drying;
 - D. immediately dies under ultraviolet radiation;
 - E. is insensitive to chemopreparations.

3. The causative agent of mumps infection:
 - A. insensitive to heat;
 - B. unstable in the external environment;
 - C. is insensitive to the effects of chemicals and disinfectants . solutions;
 - D. insensitive to ultraviolet rays;
 - E. is sensitive to antibiotics.

- 4 The causative agent of mumps infection in the environment
 - A does not die
 - B dies quickly
 - C dies only at low temperatures
 - D the resistance of the virus to chemical factors is high
 - E resistance of the virus to physical factors is high

5. Resistance of the virus to physical and chemical factors

A Absent

B Low

C High

6. Increase in the incidence of epidemics . mumps occurs:

A. every 2 years;

B. every 3-5 years;

C. every 5-7 years;

D. every 10 years;

E. there is no cyclicity

7. At what age do children get mumps most often:

A. up to 6 months;

B. in 2-3 years;

C. at 4-6 years old;

D. at 7-14 years old;

E. in high school age.

8. What is the contagiousness index for mumps infection:

A. 20-35%;

B. 35-50%;

C. 50-85%;

D. 80-100%;

E. 10-20%.

9. The incubation period for mumps infection is:

A. 3-5 days;

B. 7 days;

C. 10 days;

D. 11-21 days;

E. 30 days.

10. Epidemic virus . tropical mumps :

A. to the adrenal glands;

B. to the pituitary gland;

C. to the ovaries and Bartholin 's glands;

D. all options are correct;

E. all options are incorrect.

Recommended Books:

1. Pediatric Infectious Diseases [Текст] : textbook / S. O. Kramarev, O. B. Nadruga, L. V. Pipa etc. — 4-th edition. — Kyiv : AUS Medicine Publishing, 2020. — 240 p. + Гриф МОЗ.

2. Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / O. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi.— Vinnitsia : Nova Knyha, 2020. — 440 p.

Web-based and electronic resources

- 1 <https://www.who.int/> World Health Organization
- 2 <https://moz.gov.ua/> Міністерство охорони здоров'я України
- 3 <https://www.ecdc.europa.eu/en> European Centre for Disease Prevention and Control
- 4 <https://www.nlm.nih.gov/> U. S. National Library of Medicine
- 5 <https://pubmed.ncbi.nlm.nih.gov/> PubMed
- 6 <https://www.who.int/wer/en/> Weekly Epidemiological Record
- 7 <https://www.cdc.gov/> Centers for Disease Control and Prevention

**Methodical development
practical lesson in the discipline "Children's infectious diseases"**

Topic: Diphtheria.

Place of work Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida"
Sumy City Council, training room.

The number of hours is 2.

The goal: to be able to make a preliminary diagnosis, justify the tactics of individual treatment of patients with diphtheria, organize anti-epidemic measures in the center of infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process diphtheria;
- clinical features diphtheria depending on age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children with diphtheria in polyclinic conditions;
- treatment features children with diphtheria;
- prevention of diphtheria;

Be able:

- Follow the basic rules of working at the bedside of a diphtheria patient.
- Identify complaints, history and physical examination of the patient, symptoms characteristic of diphtheria.
- Conduct an individual diagnostic study and interpret these additional research methods.
- Establish a preliminary clinical diagnosis of diphtheria. Determine the clinical forms of the disease. Carry out differential diagnosis.
- Prescribe treatment for patients with diphtheria, taking into account the child's age, premorbid background and severity of the disease.
- Plan and carry out primary prevention and control measures aimed at preventing

- the spread of diphtheria.
- Apply deontological skills of communication with patients.

Tests to determine the basic level of knowledge:

1. To which group does the causative agent of diphtheria belong?
A Viruses.
B Bacteria.
C Mushrooms.
D Rickettsia.
E The simplest.
2. Which biovar of the diphtheria bacillus causes the most severe forms of diphtheria at the current stage:
A There is no certain correspondence between the type of corynebacterium and the severity of the disease.
B Mitis.
C Intermediate.
D Gravis.
E There is no correct answer.
3. The main source of infection in diphtheria:
A Sick person.
B Convalescent.
C Bacteriocarrier.
D All answers are correct.
4. Transmission of the causative agent of diphtheria is carried out:
A By aerosol.
B By third parties.
C Through objects.
D Through food.
E All answers are correct.
5. The entrance gates for diphtheria can be:
A Any mucous membrane and damaged skin.
B Damaged skin.
C Conjunctiva of the eye.
D Mucous membrane of the oropharynx.
E Mucous membrane of the larynx.
6. Susceptibility to diphtheria is the highest:
A From 2 to 11 years.
B In newborns.
C In children under 1 year.
D In teenagers.
E In adults.
7. The leading chain of pathogenesis in diphtheria is:
A Violation of homeostasis.
B Toxemia.

- C Bacteremia.
- D Sensitization.
- E All answers are correct.

8. Not typical for the pathogenesis of isolated diphtheria croup is:

- A Swelling of the mucous membrane of the larynx.
- B Development of significant general intoxication.
- C Spasm of the muscles of the larynx.
- D Fibrinous layers in the larynx.
- E Accumulation of thick secretion in the larynx.

9. In "vaccinated" diphtheria most often has a clinical course:

- And laryngeal diphtheria.
- D Diphtheria combined.
- In Diphtheria of the tonsils is localized.
- E Diphtheria of the tonsils is common.
- C Diphtheria of the eyes.

10. What sign is characteristic of diphtheria croup?

- A sharp beginning.
- In spasmodic cough.
- S Aphonia
- D Increasing clinical symptoms over several hours.
- E Hyperthermia up to 39-40 °C.

Recommended Books:

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 МОЗ.
2. Manual of Children's Infectious Diseases [Текст] = Дитячі інфекційні хвороби : навч. посіб. / O. Ye. Fedortsiv, I. L. Horishna, H. A. Pavlyshyn, I. M. Horishnyi. — Vinnitsia : Nova Knyha, 2020. — 440 p.
3. Methodological instructions for practical lessons "Diphtheria" on the discipline "Childhood Infections" (in accordance with the conditions of the Bologna process) [Текст] : for students of specialty 222 "Medicine" of full-time training / O. I. Smiyan, T. P. Bynda, O. G. Vasilyeva, K. O. Smiian. — Sumy : Sumy State University, 2020. — 83 p.

Web-based and electronic resources

- 1 <https://www.who.int/> World Health Organization
- 2 <https://moz.gov.ua/> Міністерство охорони здоров'я України
- 3 <https://www.ecdc.europa.eu/en> European Centre for Disease Prevention and Control
- 4 <https://www.nlm.nih.gov/> U. S. National Library of Medicine
- 5 <https://pubmed.ncbi.nlm.nih.gov/> PubMed
- 6 <https://www.who.int/wer/en/> Weekly Epidemiological Record
- 7 <https://www.cdc.gov/> Centers for Disease Control and Prevention

**Methodical development
practical lesson in the discipline "Children's infectious diseases"**

Topic: Pertussis.

Place of work: Municipal non-profit enterprise "Children's Clinical Hospital of Saint Zinaida" Sumy City Council, training room .

The number of hours is 2.

The goal: to be able to make a preliminary diagnosis, justify the tactics of individual treatment of patients with whooping cough, organize anti-epidemic measures in the center of infection.

Organizational structure of the lesson:

No	Type of work	Duration, minutes
1	Introductory speech of the teacher	10
2	Determination of the initial level of knowledge (tests)	10
3	Clinical examination of patients under the guidance of a teacher	20
4	Justification of the previous diagnosis	10
5	Definition of the main diagnostic methods	15
6	Definition of modern methods of treatment	15
7	Summary of the work	10

Illustrative material: tables, slides.

Types and forms of control: assessment of the basic level of knowledge based on testing and oral answers.

Tasks for independent preparation: work with thematic literature in the library, discussions, exchange of experience.

Educational purposes occupation :

Know:

- mechanism development and features of the epidemic process whooping cough;
- clinical features whooping cough depending on age and methods laboratory diagnostics;
- indication to hospitalization;
- supervision and treatment children with whooping cough in polyclinic conditions;
- treatment features children with whooping cough;
- whooping cough prevention;

Be able:

- Follow the basic rules of working at the bedside of a person with whooping cough.
- To single out complaints, anamnesis and physical examination of the patient, symptoms characteristic of whooping cough.
- Conduct an individual diagnostic study and interpret these additional research methods.
- Establish a preliminary clinical diagnosis of whooping cough. Determine the clinical forms of the disease. Carry out differential diagnosis.
- Prescribe treatment to patients with whooping cough, taking into account the child's age, premorbid background and severity of the disease.
- Plan and carry out primary prevention and control measures aimed at preventing

- the spread of whooping cough.
- Apply deontological skills of communication with patients.

Tests to determine the basic level of knowledge:

1 Whooping cough is caused by:

- A Epstein-Barr virus .
- B Bordet-Jangu stick .
- C Afanasyev -Pfeifer stick .
- D Herpes virus.
- E Paramyxovirus .

2 The causative agent of whooping cough:

- A Not persistent in the environment.
- B Not stable in the environment.
- C Very persistent in the environment.
- D Not sensitive to various influences.

3 Name the source of infection with whooping cough:

- A Patients with manifest , subclinical (atypical) forms of the disease.
- B Patients in the incubation period.
- C Convalescents .
- D Carriers.

4 ways of transmission of whooping cough:

- A Contact and household.
- B All answers are correct.
- C Air-drop.
- D Transmissible.
- E Parenteral.

5 Whooping cough is affected by:

- A Adults.
- B Children from the first months of life.
- C Teenagers.
- D Children of any age.
- E All answers are correct.

6 In the pathogenesis of whooping cough, it is not important:

- A The allergenic action of the whooping cough microbe.
- B Hypoxia.
- C Bacteremia .
- D The emergence of a stable focus of excitement in the medulla oblongata.
- E Effect on the body of toxins of the causative agent.

7 The main clinical symptoms of whooping cough are associated with the following manifestations:

- A Bacteremia .
- B Toxinemia .
- C Allergic manifestations.
- D Autoimmune manifestations.
- E Sensitization of the body.

8 How can the formation of a pathological dominant in whooping cough be explained?
A The influence of the toxin on the respiratory center and neurons that provide the cough reflex.

B Tropism of the causative agent to the epithelium of the respiratory tract.

C The allergenic action of the whooping cough microbe.

D Bacteremia .

E Autoimmune mechanism.

9 The classification of whooping cough does not provide for the selection of a period:

A spasmodic cough.

B Incubation.

C catarrhal.

D Residual phenomena.

E Convalescence.

10 Periods of the clinical course of whooping cough all except:

And Incubation.

B Prodromal.

C catarrhal.

D Spasmodic.

E Symptom reduction.

Recommended Books:

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 МОЗ.

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Web-based and electronic resources

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