Appendix to the working program

Federal State Budgetary Educational Institution of Higher Education
"Privolzhsky Research Medical University"
Ministry of Health of the Russian Federation

BANK OF ASSESSMENT TOOLS FOR DISCIPLINE PEDIATRICS

PEDIATRICS

Training program (specialty): **31.05.03 DENTISTRY**
(code, name)
Department: **FACULTY AND POLYCLINIC PEDIATRICS**

Mode of study **FULL-TIME**
(full-time/mixed attendance mode/extramural)

Nizhniy Novgorod
2021

1. Bank of assessment tools for the current monitoring of academic performance, mid-term assessment of students in the discipline / practice

This Bank of Assessment Tools (BAT) for the discipline "PEDIATRICS" is an integral appendix to the working program of the discipline "PEDIATRICS". All the details of the approval submitted in the WPD for this discipline apply to this BAT.

(Banks of assessment tools allow us to evaluate the achievement of the planned results stated in the educational program.

Assessment tools are a bank of control tasks, as well as a description of forms and procedures designed to determine the quality of mastering study material by students.)

2. List of assessment tools

The following assessment tools are used to determine the quality of mastering the academic material by students in the discipline/ practice:

No.	Assessment tool	Brief description of the assessment tool	Presentation of the assessment tool in the BAT
1	Test	A system of standardized tasks that allows you to automate the procedure of measuring the level of knowledge and skills of a student	Bank of test tasks
2	Case - task	A problem task in which the student is offered to comprehend a real professionally-oriented situation necessary to solve this problem.	Tasks for solving cases
3.	Control work	A tool of checking the ability to apply acquired knowledge for solving problems of a certain type by topic or section	Set of control tasks in variants
4.	Individual survey	A control tool that allows you to assess the degree of comprehension of the material	List of questions
5.	Interview	A tool of control organized as a special conversation between the teacher and the student on topics related to the discipline being studied, and designed to clarify the amount of knowledge of the student on a specific section, topic, problem, etc.	Questions on topics/sections of the discipline
6.	Situational tasks	A method of control that allows you to assess the criticality of thinking and the degree of the material comprehension, the ability to apply theoretical knowledge in practice.	List of tasks
7.	Report	The product of the student's independent work, which is a public presentation about the results obtained by solving a certain educational, practical, research or scientific topic	Topics of reports, presentations

3. A list of competencies indicating the stages of their formation in the process of mastering the educational program and the types of evaluation tools

Code and formulation of	Stage of competence	Controlled sections of the discipline	Assessment tools

competence*	formation		
UC – 1, UC – 4, UC- 5 GPC – 4, GPC – 5, GPC-7, GPC – 10 PC – 1, PC – 3, PC – 8, PC – 9	Current	Nutrition of infants of the first year of life (breastfeeding, artificial). The benefits of breastfeeding. Artificial feeding. Types of infant's formulas and principles of their purpose. Complementary food. Types of complementary foods. The principles of the appointment of complementary foods. Preparation of a diet for children of the first year of life who are on various types of feeding. Physical development of infants of the first year of life. Mass-growth indicators of infants of the first year of life are normal and pathological. Parametric and nonparametric methods of assessing physical development. Factors affecting the physical development of children. Psychomotor development of children of the 1st year of life. Developmental milestones.	*Interview 1-10 Report 1-4 Situational tasks 1-4 Test 1 Test 2*
UC – 1, UC – 4, UC- 5 GPC – 4, GPC – 5, GPC-7, GPC – 10 PC – 1, PC – 3, PC – 8, PC – 9	Current	A newborn baby. Morphological and functional features of organs and systems of the newborn. Features of examination of the newborn in the delivery room and after discharge from the maternity hospital. The Apgar scale. Transitional states of the newborn. Principles of newborn care. Pathological conditions in the neonatal period. Asphyxia of a newborn. Clinical and laboratory diagnostic criteria. Principles of resuscitation. Perinatal CNS lesion. Clinical and laboratory criteria. Birth trauma. Reasons. Classification. Diagnostic criteria. Principles of correction. Jaundice of newborns. Reasons. Differential diagnosis. Hemolytic disease of the newborn. Etiopathogenesis. Clinical and laboratory diagnostic criteria. Principles of treatment.	*Interview 11-17 Situational tasks 5-8 Test 3*
UC – 1, UC – 4, UC- 5 GPC – 4, GPC – 5, GPC-7, GPC – 10	Current	Vitamin-D-deficiency Rickets. Features of the course of rickets at the present stage. Risk factors. The biological role of vitamin D and calcium in the child's body. Pathogenesis of rickets.	*Interview 18-24 Report 5-6 Situational tasks 9-10 Test 4*

PC – 1, PC – 3, PC – 8, PC – 9		Classification. Clinical options. Criteria for laboratory and instrumental diagnostics. Changes in bones in rickets. (Ro-grams). Prevention and treatment of rickets in children. Iron deficiency anemia. Classification of anemia. Criteria for the diagnosis of iron deficiency. Diet therapy. Principles of treatment and prevention. Atopic dermatitis. Risk factors. The role of heredity and food allergy. Triggers. Pathogenesis. Diagnostic criteria. The SCORAD scale. Laboratory tests. Principles of local therapy. Diet therapy.	
UC – 1, UC – 4, UC- 5 GPC – 4, GPC – 5, GPC-7, GPC – 10 PC – 1, PC – 3, PC – 8, PC – 9	Current	Morphological and functional features of the bronchopulmonary system in children. Physical methods of examination of the bronchopulmonary system. Pneumonia in children. Definition and classification. Age-depended Etiology. Pathogenesis. Clinical and diagnostic's criteria. Differential diagnosis. Differentiated choice of antibacterial therapy. Bronchoobstructive syndrome. Clinical and diagnostic criteria. Principles of emergency care.	*Interview 25-30* *Report 7-10* *Situational tasks 11-15* *Test 5* *Test 6*
UC – 1, UC – 4, UC- 5 GPC – 4, GPC – 5, GPC-7, GPC – 10 PC – 1, PC – 3, PC – 8, PC – 9	Current	Morphological and functional features of the cardiovascular system in children. Features of fetal and newborn blood circulation. Physical methods of cardiovascular system examination. Congenital heart defects. Risk factors. Classification. CHD with left-to-right shunt ('pale')– VSD,ASD,PDA. Defects with right-left shunting ("blue"): tetralogy of Fallot, hypoplasia of the left heart syndrome, transposition of great vessels, Eisenmenger syndrome. Features of hemodynamics. Clinical and Diagnostic criteria. Complications. Principles of therapy. Acute rheumatic fever in children. Etiology. Pathogenesis. Diagnostic criteria. Classification. Clinic. Features of treatment. Primary, secondary and tertiary prevention of ARF Carditis in children. Etiology. Pathogenesis. Classification. Diagnostic criteria. Differential diagnosis. Treatment. Prevention	*Interview 31-38* *Report 11-14* *Situational tasks 16-19* *Test 7*

UC – 1, UC – 4, UC- 5 GPC – 4, GPC – 5, GPC-7, GPC – 10 PC – 1, PC – 3, PC – 8, PC – 9	Current	Morphological and functional features of the hematopoietic system in children. Indicators of white and red blood are normal and depending on age. Pathology of the blood system in children: Hemolytic anemia (hereditary spherocytosis), hemoglobinopathies (sickle cell anemia, thalassemia). Hemorrhagic syndromes in pediatrics: Coagulopathy (hemophilia). Immune rhombocytopenia. Etiology. Pathogenesis. Clinic. Diagnostics. Principles of therapy.	*Interview 39-42 Situational tasks 20-22 Test 8*
UC – 1, UC – 4, UC- 5 GPC – 4, GPC – 5, GPC-7, GPC – 10 PC – 1, PC – 3, PC – 8, PC – 9	Current	Functional disorders of the gastrointestinal tract in young children. Regurgitation and vomiting syndrome. Intestinal colic. Etiology. Diagnostics. Treatment. Diet therapy. Acid-dependent diseases in children: Chronic gastroduodenitis, Peptic and duodenal ulcer. GERD. Clinical and diagnostic criteria. Principles of therapy	*Interview 43-45 Report 15 Situational tasks 23 Test 9*
UC – 1, UC – 4, UC- 5 GPC – 4, GPC – 5, GPC-7, GPC – 10 PC – 1, PC – 3, PC – 8, PC – 9	Current	Urinary tract infection: acute pyelonephritis, acute cystitis. Etiology. Clinical and diagnostic criteria. Differential diagnosis. Treatment. Glomerulonephritis in children. An approach to the diagnosis of hematuria and proteinuria in children. Acute post-streptococcal glomerulonephritis. Etiopathogenesis. Clinical and Diagnostic criteria. Principles of therapy. Nephrotic syndrome. Definition. Morphological variants. Etiopathogenesis. Clinical and laboratory criteria. Therapy.	*Interview 46-49 Report 16-18 Situational tasks 28-31 Test 10*
UC – 1, UC – 4, UC- 5 GPC – 4, GPC – 5, GPC-7, GPC – 10 PC – 1, PC – 3, PC – 8, PC – 9	Current	Acute intestinal infections in children. Etiology. Epidemiology Classification. Signs and symptoms. Differential diagnosis. Complications (exicosis with toxicosis). Types and severity of dehydration. Principles of oral and parenteral rehydration. Features of diet therapy for Acute intestinal infections. Helminthic invasion in children: lyabliosis, ascariasis, enterobiosis. Signs and symptoms Diagnostic's criteria. Principles of deworming.	*Interview 50-52 Report 19-22 Situational tasks 42-47*
UC – 1, UC – 4, UC- 5 GPC – 4, GPC – 5, GPC-7, GPC – 10	Current	Vaccination of infectious diseases in children. Definition of active and passive immunization. Types of vaccines. Basic principles of vaccination. Vaccination – schedule in different countries. Adverse	*Interview 53-54 Report 23 Situational tasks 48-50 Test 11*

PC – 1, PC – 3, PC – 8, PC – 9		effects of vaccination. Anaphylactic shock. Signs and symptoms. Emergency assistance	

* - *not provided for postgraduate programs*

Interview

1 Type of child's feeding. Exclusive breast-feeding. Definition. Benefits of breast-feeding and breast milk.

2 Types of breast milk. Colostrum. Regulation of lactation. Recommendations for establishing of successful breast-feeding.

3 Signs of successful breast-feeding.

4 Common maternal and child problem for breastfeeding.

5 Findings of readiness for complementary food introduction. Supplementation. Definition. Example.

6 Date of introduction complementary foods. Solid food introduction during first year of life.

7 Artificial feeding. Definition. Harm of cow's milk. Content of human and cow's milk.

8 Physical development. The main indexes of Physical development. Normal weight and height gain of first year old child.

9 What factors influence on the body's height and body's weight of a child. Reasons of violation of body's height and body's weight.

10 Psychomotor development. Developmental milestones.

11 Normal and abnormal gestational periods. Features of cardiovascular system of newborn children.

12 Physical examination of skin in newborn children. Physiological jaundice. Physical examination of head and face, chest and heart, abdomen, kidneys, genitalia, extremities in newborn children. Newborn's reflexes.

13 Perinatal asphyxia. Etiology of asphyxia. Effects of asphyxia. Apgar score. Posnatal symptoms of asphyxia. Resuscitation.

14 Respiratory distress syndrome. Definition. Pathophysiology. Clinical manifestation. Preventions and treatment.

15 Birth trauma. Risk-factors. Types of extracranial hemorrhage. Types of intracranial hemorrhage, common clinical features.

16 Birth trauma. Risk-factors. Facial nerve injuries. Management.

17 Bilirubin metabolism in newborn infants. Features of nonphysiologic hyperbilirubinemia. Indirect unconjugated hyperbilirubinemia. Hemolytic disease of newborns. Types. Pathophysiology. Clinical features, classification. Laboratory tests. Treatment. Direct conjugated hyperbilirubinemia.

18 Rickets. Classification. VitD metabolism in organism.

19 Rickets. Prophylaxis of vitamin D-deficiency rickets.

20 Rickets. Etiology. Clinical manifestation and treatment of vitamin D-deficiency rickets.

21 Anemia. Classification. Etiology of iron deficiency anemia.

22 Iron deficiency anemia. Clinical features and treatment.

23 Atopic dermatitis. Definition. Triggers. Diagnostic criteria.

24 Atopic dermatitis. Laboratory tests. Principles of local therapy. Diet therapy.

25 Pneumonia in children. Definition and classification. Age-depended Etiology. Pathogenesis.

26 Pneumonia in children. Clinical and diagnostic's criteria. Differential diagnosis.

27 Pneumonia in children. Differentiated choice of antibacterial therapy.

28 Bronchial asthma. Risk factors. The mechanism of bronchial asthma development. Classification.

29 Bronchial asthma. Signs and symptoms. Laboratory markers. Research by functions of external respiration.

30 Bronchial asthma. Treatment. Basic therapy. Therapy of acute asthma attack.

31 Congenital heart defects. Risk factors. Classification.

32 CHD with left-to-right shunt ("pallor"): VSD, ASD, PDA. Hemodynamics features. Common signs and symptoms.

33 CHD with limited systemic blood floor: Coarctation of Aorta. Hemodynamics features. Signs and symptoms.
34 CHD ("blue"): tetralogy of Fallot. Hemodynamics features. Signs and symptoms.
35 Acute rheumatic fever in children. Etiology. Pathogenesis.
36 Acute rheumatic fever in children. Jones criteria for ARF.
37 Acute rheumatic fever in children. Treatment. Prophylaxis.
38 Myocarditis in children. Etiology. Pathogenesis. Classification. Diagnostic criteria. Differential diagnosis. Treatment. Prevention.
39 Hemolytic anemia: hereditary spherocytosis. Etiology. Pathogenesis. Signs and symptoms. Laboratory investigations. Principles of therapy
40 Hemoglobinopathies: sickle cell anemia, thalassemia. Etiology. Pathogenesis. Signs and symptoms. Laboratory investigations. Principles of therapy
41 Hemorrhagic syndromes in pediatrics: Coagulopathy (hemophilia). Etiology. Pathogenesis. Signs and symptoms. Laboratory investigations. Principles of therapy.
42 Hemorrhagic syndromes in pediatrics: Immune trombocytopenia. Etiology. Pathogenesis. Signs and symptoms. Laboratory investigations. Principles of therapy Immune trombocytopenia.
43 Acid-dependent diseases in children: Chronic gastroduodenitis. Clinical and diagnostic criteria. Principles of therapy
44 Acid-dependent diseases in children: Peptic and duodenal ulcer. Clinical and diagnostic criteria. Principles of therapy
45 Acid-dependent diseases in children: GERD. Clinical and diagnostic criteria. Principles of therapy.
46 Acute pyelonephritis. Etiology. Signs and symptoms. Laboratory tests. Treatment.
47 Acute cystitis. Etiology. Signs and symptoms. Laboratory tests. Treatment.
48 Acute post-streptococcal glomerulonephritis. Etiopathogenesis. Clinical and Diagnostic criteria. Principles of therapy.
49 Nephrotic syndrome. Definition. Morphological variants. Etiopathogenesis. Clinical and laboratory criteria. Therapy.
50 Acute intestinal infections in children. Etiology. Epidemiology Classification. Signs and symptoms. Differential diagnosis.
51 Acute intestinal infections in children. Complications: dehydration. Types and severity of dehydration.
52 Acute intestinal infections in children. Principles of oral and parenteral rehydration. Diet therapy of acute intestinal infections.
53 Vaccination of infectious diseases in children. Definition of active and passive immunization. Types of vaccines. Basic principles of vaccination. WHO recommended schedule of vaccination.
54 Adverse effects of vaccination. Anaphylactic shock. Signs and symptoms. Emergency assistance.

Report

1 List types of infant formulas.
2 Malabsorption syndrome: celiac disease. Etiology. Pathogenesis. Diagnosis. Treatment. Principles of diet therapy
3 Malabsorption syndrome: cystic fibrosis. Etiology. Pathogenesis. Diagnosis. Treatment. Principles of diet therapy
4 Malabsorption syndrome: lactase deficiency. Etiology. Pathogenesis. Diagnosis. Treatment. Principles of diet therapy
5 The role of vitamin D and its biological effects in the child's body.
6 Iron exchange in organism
7 Foreign body aspiration.
8 Cystic fibrosis. Pulmonary form. Clinical signs and symptoms. Treatment.
9 Types of drug delivery in the treatment of bronchial asthma.

10 Specific immunotherapy.
11 Transposition of the main vessels.
12 Hypoplasia of the left heart
13 Chronic heart failure. Signs and symptoms. Treatment of CHF in children.
14 Infectious endocarditis. Signs and symptoms. Diagnostic criteria. Principles of therapy.
15 Chronic diarrhea in children
16 Chronic kidney disease. Signs and symptoms. Principles of treatment.
17 Acute kidney injury. Etiology. Signs and symptoms. Principles of treatment.
18 Side effects of glucocorticosteroid therapy.
19 Salmonellosis. Etiology. Signs and symptoms. Principle of therapy
20 Dysentery. Etiology. Signs and symptoms. Principle of therapy
21 Rotavirus infection. Etiology. Signs and symptoms. Principle of therapy
22 E.coli infection. Etiology. Signs and symptoms. Principle of therapy
23 Vaccination – schedule in different countries.

Situational tasks

1. The boy 4.5 mo (5 mo, 5.5 mo., 6 mo., 6.5 mo., 7 mo., 7.5 mo., 8.0 mo., 8.5 mo., 9.0 mo., 9.5 mo., 10 mo., 10.5 mo, 11 mo., 11,5 mo., 12 mo.) old is breastfeed. His birth weight is 2850 g. Prescribe a one-day diet for this baby.
2. A previously healthy, well-developed 6-month-oid infant develops diarrhea that proves to be due to rotavirus infection that lasts 3 weeks and requires treatment with intravenous and oral rehydration fluids. Thereafter, the infant is again fed with the regular infant formula that was used before this illness. Each time the infant receives this formula, the infant develops watery diarrhea, which is now rotavirus negative.
   Questions:
   Make the initial diagnosis and explain it.
   What laboratory test will confirm the diagnosis?
   What type of diarrhea is presented?
   Make differential diagnosis.
   What is main principle of therapy?

3. The boy of 8 month old was admitted to the hospital. At admission the mother said about the child's poor gain in weight, frequent cough, relapsing bronchitis. The mother marked the child's large volume liquid fatty stool. The pregnancy proceeded without complications; the child was born in time. The birth weight of the child was of 3500 g, length 53 cm. The child was breastfeed, complementary foods was started since 5 months. Now the weight of the child's body is 6300 g, length - 68 cm.
   Medical examination: Current general condition of the child was serious. The skin was pale and clear. The subcutaneus fat was weak; on the chest it was absent. The turgor of tissues was reduced. There was muscle hypotonia. The hard respiration was defined in the lungs. Sounds were tympanic by percussion of lungs. The cardiac sounds were rhythmical and clear. The stomach was enlarged in size. The liver was palpable 3 cm out from the margin of the rib arc. Stool was 6 times per day, with large size, liquid.
   Investigation: CBC: Hb - 105 g/L, Er - $3{,}0 \cdot 10^{12}$/L, Le - $7{,}2 \cdot 10^{12}$/L. Chloridums of sweat - 95 mmol/L. Chest X-ray - there was intensifying pulmonary drawing on all lungs fields. The sings of bronchitis were available.
   Questions:
   Make and explain the diagnosis.
   Etiology, pathogenesis, and clinical signs of this disease.
   Additional laboratory tests for confirming diagnosis of this disease.
   Define the main principles of therapy of the disease.
   What is the role of neonatal screening in diagnosis of the disease?

4. An 8-year-old white male is noted to be underweight and not growing well. Past medical

history reveals three episodes of "pneumonia" and wheezing thought to be asthma. His appetite is good, but he has had intermittent diarrhea since weaning from breast milk.

Questions

Make the initial diagnosis and explain it.
What are main etiological and pathogenetic mechanisms of this disease?
What organs and systems are usually involved in the disease?
What laboratory studies are needed to make a diagnosis?
Main principle the treatment of this disease?

5. A 900-g infant of 27 weeks' gestational age developed respiratory distress syndrome and required endotracheal intubation on the first day of life. At 36 hours of age, the infant developed hypotension, bradycardia, cyanosis, and a tense anterior fontanel.

Questions:
What does RDS mean?
What could provoke the deterioration of the patient's condition?
Make the initial diagnosis and explain it.
What risk factors of this condition are presented?
What is the most appropriate diagnostic test? What results do you expect?

6. A 42-week-gestational-age, 3600-g, breast-fed, white female is noted to have persistent hyperbilirubinemia at 2 weeks of age. On physical examination, the infant has not gained weight since birth and has decreased tone, an umbilical hernia, and an anterior fontanel measuring 4X4 cm.

Questions:
Make the initial diagnosis and explain it.
What laboratory studies are needed to make a diagnosis?
What therapy does the patient need? For how long?
What is prognosis in this disease?
Approach to the newborns with neonatal hyperbilirubinemia.

7. A 4-week-old, A-positive, African-American, former 40-week-gestational-age infant was born to an O-positive mother and developed hyperbilirubinemia requiring 2 days of phototherapy in the newborn nursery after birth. The infant appears apathetic and demonstrates pallor, a grade 2/6 systolic ejection murmur, and a heart rate of 175.

Questions:
Make the initial diagnosis and explain it.
What is etiology and pathogenesis of the disease?
What laboratory studies are needed to confirm the diagnosis?
Approach to the newborns with neonatal hyperbilirubinemia.
What are prognostically dangerous factors for development of kernicterus?

8. A full-term male, born from a normal spontaneous vaginal delivery, appeared well until 3 weeks of age, when he developed fever, irritability, and poor feeding. Twelve hours later, the examination revealed a pale, lethargic infant with poor suck and fair muscle tone. His temperature was 40°C, pulse was 180, and respiratory rate was 60. His fontanel was firm, his chest was clear, his abdomen was not distended, and no organs or masses were palpable. His skin showed normal turgor with capillary refill less than 3 seconds. White blood cell (WBC) count was $2.8 * 10^9$/l, with 13% segmented cells and 12% bands. д

Questions:
What is the most appropriate next step in diagnosis?
Differential diagnosis between bacterial and aceptic meningitis.

Make the initial diagnosis and explain it.
Main etiological and pathogenetic mechanisms of this disease.
Main principles the treatment of this disease.

9. An 18-month-old Caucasian male is brought to your office for a routine health maintenance visit. The mother reveals that the child always appears hungry; in fact, he drinks a quart of whole milk a day and also eats dirt. Intake of solid foods is sporadic, but the mother states that she thought all 18-month-olds were "picky eaters." Physical examination reveals mild pallor of the conjunctivae. He has no hepatosplenomegaly, and the rest of the examination findings are normal. Based on the information, which of the following would be the most likely to determine the diagnosis?

Questions:
Make the initial diagnosis and explain it.
What is etiology and pathogenesis of this disease?
What changes do you expect in laboratory tests?
What are main principles of therapy
In what doses and for how long is it necessary to treat the patient?

10. The boy of 3 month old had the expressed xeroderma, itching on cheeks, hyperemia, crack, vesicular eruption. From anamnesis: the first symptoms appeared after the first introduction of milk formula as cheeks redness and itching.
Medical examination: Physical development was normal. The skin was dry. There were hyperemia, dryness and infiltration of cheeks. Respiratory sounds were normal. Cardiac sounds were rhythmical. Abdomen was soft, painless. Stool was normal.
Investigation
CBC: Hb - 122g/L, Er - 3,2·10*12/L, Le - 7,0·10*9/L, ESR - 6 mm/h.
Immunology: IgE – 910 IU/l (normal level up to 100 IU/l)

Questions:
Make the initial diagnosis and explain it.
What is etiology and pathogenesis of this disease?
What treatment would you recommend for this child?
What are you recommendations about vaccination of the patient?
What are you recommendations about prevention of the disease?

11. A 2-year-old previously well male is brought to you with cough and fever. His history unremarkable. Physical examination revels toxic, ill child with fever, dyspnea, and decreased breath sounds in the right middle lung fields. Posteroanterior and lateral chest radiographs reveal an infiltrate in the right middle lobe. His left lung is clear. Leukocyte count is 19,000/mm^3 with 54% polymorphonuclear neutrophils, 18% bande forms, and 28% lymphocytes. The child is admitted to the hospital.
Questions:
Give conclusion about laboratory and instrumental results.
Make the initial diagnosis and explain it.
Make differential diagnosis.
What are main principles of therapy?
Prescribe antibacterial drug for the patient.

12. A l4-year-old white female with the diagnosis of severe recurrent reactive airway disease since age 1 year comes to the emergency room with fever and cough for 2 weeks. The child has purulent sputum, bilateral wheezing, and rales but is not "tight." Her weight is below the fifth percentile, she has no secondary sex characteristics, and mild digital clubbing is noted.
Questions:

Main etiological and pathogenetic mechanisms of this disease?
Main principle the treatment of this disease?

13. An 8-year-old white male is noted to be underweight and not growing well. Past medical history reveals three episodes of "pneumonia" and wheezing thought to be asthma. His appetite is good, but he has had intermittent diarrhea since weaning from breast milk.
Questions:
Main index for the appropriated laboratory test?
Make the initial diagnosis.
Main principle the treatment of this disease?

14. The child of 3 years old fell ill acutely. There was runnig temperature up to 39ºC, dry, painful cough, and headache. The child was from the first pregnancy, the pregnancy was with toxicosis. The child had respiratory distress syndrom in the newborn period. The child was frequently ill with acute respiratory infections. He had tonsillitis, chickenpox, and rubella.
Medical examination: General condition was serious. The skin was pale, nasolabial cyanosis of triangle was determined. Mucous of oral cavities was clean, dry. Respiration was "grunting respiration", the number of respiratory movements was 62 for once minute. The chest was enlarged in the front - back size, the right part of the chest slowed down in respiration. On percussion the area of dull percussion was defined in the right side. On auscultation bronchial breath sounds, diminished breath sounds in the right side and fine moist rales were determined. The cardiac sounds were clear, clean. The stomach was soft, painless. The liver was determined near the edges of the rib.
Investigation :CBC: Hb -105 g/L, Er - 3,5·10^12/L, Le - 18,6·10^9/L, ESR - 28 mm/h. Chest X-ray: the intensive darkness was marked in the area of VIII -IX segments of the right lung.

Questions:
Make the initial diagnosis:
Main principles of antibacterial therapy of this disease.
What complications of the disease do you know?

15. A 3-year-old has had a loose cough without sputum for 2 months. The cough is getting worse, especially at night. It keeps his parents awake although the child sleeps through the cough. Family history revealed that the mother has eczema and the father has had "hay fever."
Questions:
Make the initial diagnosis and explain it.
What is etiology and pathogenesis of the disease?
What laboratory and instrumental tests will confirm the diagnosis?
What are main principles of therapy?
What is a prognosis?

16. An 18-month-old is noted to assume a squatting position frequently during play time at the daycare center. The mother also notices occasional episodes of perioral cyanosis during some of these squatting periods. The day of admission, the child becomes restless, hyperpneic, and deeply cyanotic. Within 10 minutes, the child becomes unresponsive.
Questions:
Make the initial diagnosis and explain it.
What laboratory and instrumental tests will confirm the diagnosis?
Emergency care of this situation?
What is a prognosis?

17. A previously well 3 1/2-month-old presents with poor feeding, diaphoresis during feeding, and poor growth. Vital signs reveal respirations of 70, pulse of 175, and blood pressure of 90/65 mm Hg in the upper and lower extremities. The cardiac examination reveals a palpable parasternal lift and a systolic thrill. A grade 4 holosystolic murmur and a middiastolic ramble are noted. The chest radiograph reveals cardiomegaly.
Questions:
Make the initial diagnosis and explain it.
What instrumental tests will confirm the diagnosis?
Complications which child reveals in this case?
What is a prognosis?

18 A 12-year-old female is noted to have a blood pressure of 170/110 mm Hg during a routine grade physical examination for school sports participation. She is asymptomatic but has been noted to have a grade 1-2/6 short systolic murmur at the left sternal border.
Questions:
What is the next diagnostic test to be performed to confirm the diagnosis?
Make the initial diagnosis.
Additional instrumental investigation for confirming of this disorder?
Describe typical clinical manifestations of the disease.
19. The girl of 12 years old complained of fatigability, bad appetite, pain in ulnar, knee joints, running temperature. The girl had tonsillitis a month ago.
Medical examination: General state was moderate. The skin was pale. On face the hyperemia was not defined. Vesicular breath sounds were auscultated over lung fields. The heart borders: the right - the right border of the sternum, the upper border - between the second and the third ribs, the left - 3 cm to the left from the midclavicular line. On auscultation the systolic murmur were heard in the heart apex and in the Erba's point. Pulse was 108 beats per minute. The joints of ulnar and knee were hot and painful. The liver and spleen were not enlarged.
Investigation
CBC: Hb - 108 g/L, Er - 3,0•10^12/L, Le - 12,0•10^9/L , ESR - 28 mm/h.
Blood chemistry: total protein - 80 g/L, albumin - 46 %, γ-globulins - 25 %, C-reactive protein - positive.
Questions:
It is necessary to make and substitute the initial diagnosis
What laboratory and diagnostic tests are necessary for determining the diagnosis?
What is the treatment of choice?

20. A 5-year-old white female has multiple bruises on her lower extremities and oral-mucosal bleeding of 3 days' duration. Two weeks before these signs, she had a mild respiratory tract infection. Physical examination reveals multiple ecchymoses and petechiae; no lymphadenopathy or hepatosplenomegaly is noted.

Questions:
Prescribe diagnostic test and explain expected results.
Make the initial diagnosis.
What is etiology and pathogenesis of the disease?
What are main principles of therapy?
What is a prognosis?

21. A 10-month-old white male presents with a 1-day history of persistent bleeding after cutting his lip slightly. The family history is unremarkable, and the patient is receiving no medications. Laboratory data reveal a hemoglobin value of 11 g/dL, platelets of 350,000, a

prothrombin time of 11.8 seconds, and a partial thromboplastin time (PTT) of 100 seconds, which is corrected by mixing of normal plasma.
Questions:
Make the initial diagnosis and explain it.
Prescribe diagnostic test and explain expected results.
Make differential diagnosis.
What are main principles of therapy
Give recommendations for the patient.

22. A 1-year-old presents with pallor of 3 months' duration. Past medical history reveals neonatal hyperbilirubinemia that was treated with phototherapy for 1 week and a father who had a splenectomy at the age of 2 years for unknown reasons. On physical examination, the child is pale and has splenomegaly (4 cm below the left costal margin).
Questions:
Make the initial diagnosis and explain it.
What is etiology of this disease?
What are clinical manifestations of this disease?
Prescribe diagnostic test and explain expected results.
What are main principles of therapy?

23. The girl of 12 years old, was sick for 1 year, complained of fasting pains in epigastric area, which occured in the morning and in 1,5-2 hours after meal, at night, it disappeared after meals. The acidic regurgitation was disturbed. The mother of the child had peptic ulcer in the anamnesis, the father had gastritis. Medical examination: Physical development was normal. The skin and mucosas of the oral cavity were clean. On palpation abdomen was intense, morbid in the epigastric area and in the pyloroduodenal zone. The liver was not enlarged, painless. There were no pathologies in other organs. Investigation: CBC: Hb - 128 g/L, Er - 4,2·10^12 /L, color index - 0,91, Le - 7,2·10^9/L. Urinalysis is normal. Ultrasonic investigation: The liver was not enlarged. The gallbladder had strangulation. The pancreas had homogeneous structure.
Assignment
Make the initial diagnosis:
What researches are necessary for confirming the diagnosis?
Prescribe a treatment to this patient.

28. A 3-year-old female presents with vomiting, diarrhea, and fever. A urinalysis shows pyuria and hematuria, and a culture grows greater than 10^5 colonies of *E. coli*. She responds well to hydration and intravenous antibiotics.
Questions:
Make the initial diagnosis, explain it.
What laboratory and instrumental tests are needed? What results do you expect?
Make differential diagnosis.
What are main principles of therapy?
Prescribe antibacterial drugs for the patient.

29. A 4-year-old male developed an upper respiratory tract infection that was followed in 2 weeks by general edema. His blood pressure is normal. Urinalysis reveals 2 to 5 red blood cells per high-power field and 4 + protein. His BUN is 19 mg/dL, creatinine 0.6 mg/dL, cholesterol 402 mg/dL, serum albumin 0.9 g/ dL, antistreptolysin O titer 1:16, and C3 92 mg/dL.
Assignment
Make the initial diagnosis and substantiate it.
What treatment is necessary for this patient?

Make differential diagnosis.

30. A 8-year-old female presents to the emergency department with a seizure. On initial evaluation, the patient appears to be post-ictal, but is otherwise okay. Initial vital signs are significant for blood pressure of 180/110. She has never had a seizure before. On further questioning, the patient s parents report that she had several episodes of coca-cola colored urine a few days ago, and was seen by her doctor and given an antibiotic for presumed urinary tract infection. Over the last few days prior to her presentation, she has been complaining of headaches. Otherwise the patient has been fine. She has never been hospitalized, takes no medications, and she has no known allergies. She is in 3rd grade, and plays soccer in a local league. She is very seldom ill, and with the exception of a sore throat 2 weeks ago, she has had no other recent illnesses. CT of the head is normal.
Questions:
What is the most likely diagnosis?
What would be the most likely urinalysis and laboratory findings in the patient in the previous question?
Define the etiology of the disease.
Make differential diagnosis.
What are complications of the disease?
What treatment is necessary for this patient?

31. A 5-year-old boy develops severe abdominal pain of 3 days' duration. He is unable to eat and has occasional emesis. Physical examination reveals an anxious, acutely ill child with generalized abdominal tenderness, voluntary guarding of the anterior abdominal muscles, and normal findings on rectal examination. A surgical consultant believes the child has an acute abdomen, possibly appendicitis. Before the child is sent to the operating room, the urinalysis reveals 3 + hematuria and 1 + proteinuria. The patient also has petechias over the dorsal surfaces of the feet and hands and over the buttocks. His platelet count is 350,000.

Questions:
Make the initial diagnosis and explain it.
What are main etiological and pathogenetic mechanisms of this disease?
Make differential diagnosis in this case.
Main principles the treatment of this disease?
What is prognosis of the disease?

42. A 12-month-old infant is admitted to the hospital because of dehydration and diarrhea of 3 days' duration. The infant weighed 10 kg at a well visit 1 week ago. She has had 10 to 12 stools per day for the past few days and a temperature of 39°C. She has not urinated for the past 18 hours. Physical examination reveals sunken eyes and dry, tenting skin. Which of the following would you do first?
Questions:
Make the initial diagnosis and explain it.
What degrees of dehydration do you know?
What laboratory tests are necessary to perform?
Main principle of IV rehydration therapy.

43. A 2-year-old male comes to your office with profuse watery diarrhea. His father just returned from a trip to St. Petersburg, Russia, and has been suffering from diarrhea for more than a week. His physician diagnosed *Cryptosporidium* infection on stool examination.
Questins:
What degrees of dehydration do you know?
What complications are possible?

Main principles of oral rehydration therapy for the child of the 1st year of life?
What are main principles of the treatment of this disease?
Are there indications for antibiotic therapy?

44. A 6-month-old breast-fed infant presents with a 24-hour history of diarrhea but no emesis. On examination, the child is afebrile, has normal vital signs, but has slightly sunken eyes and fontanel. She continues to nurse fairly well.
Question:
What degrees of dehydration do you know?
What is a most appropriate therapy?
What are main principles of oral rehydration therapy for the child of the 1st year of life?
Are there indications for antibiotic therapy?

45. A previously healthy, well-developed 6-month-oid infant develops diarrhea that proves to be due to rotavirus infection that lasts 3 weeks and requires treatment with intravenous and oral rehydration fluids. Thereafter, the infant is again fed with the regular infant formula that was used before this illness. Each time the infant receives this formula, the infant develops watery diarrhea, which is now rotavirus negative.
Questions:
Make the initial diagnosis and explain it.
What laboratory test will confirm the diagnosis?
What type of diarrhea is presented?
Make differential diagnosis.
What is main principle of therapy?

46. A 3-year-old male presents with a 12-hour history of severe watery diarrhea, sunken eyes, poor skin turgor, dry mouth, and anuria. He has no fever, polyuria, polydipsia, or polyphagia.
Questions
What agents typically cause this syndrome?
Make the initial diagnosis.
What complications are possible?
Classify degree of dehydration in the patient.
Discuss treatment options

47. A 10-month-old child presents with a temperature of 105°F, watery diarrhea, and a generalized seizure.
Questions
What agents usually cause this syndrome?
Make the initial diagnosis.
What is etiology and pathogenesis of the disease?
What clinical forms can this infectious agent cause?
Prescribe treatment to the patient.

48. The boy of 4 month old had insignificant xeroderma, hyperemia on the cheeks. The first changes on the skin appeared in 3 months of age, after introduction of infant formulae. The changes on the skin were expressed. The child had the expressed xeroderma, itching, and vesicular eruption in wrinkles of the skin. The patient received prolonged treatment which included a diet, antihistamine medicines, oils, creams. Now the boy has the period of remission of the pathological process. The child has the following inoculations: BCG, and two inoculations for hepatitis B.
Assignment
Give your suppositions about the diagnosis.
Prescribe a schedule of vaccination for the child the first year of life.

49. The boy is of 4 months old. The child was born in time, the weight was 2600 g. Asphyxia was defined at birth. The child required resuscitation. From maternity house the child was admitted to the hospital with the diagnosis of pneumonia. The diagnosis of sepsis was made in the hospital. The child was treated in the hospital, then in the polyclinic. The inoculations were not made in the maternity home. Now this patient is healthy. He is in good condition.

Assignment

Prescribe a schedule of vaccination for the child the first year of life.

50. A 12-year-old with repeated episodes of streptococcal pharyngitis develops another episode of sore throat. The rapid strep test is positive, and oral ampicillin is started, with the first dose given in the office. One hour later, she develops a funny feeling and a tingling sensation around her mouth. Next, she becomes apprehensive, has difficulty swallowing, and develops a hoarse voice. On arrival at the emergency room, she has giant urticaria and the following vital signs: pulse 130, respiratory rate 32, blood pressure 70/30, and temperature 37.2^0C.

Questions:

Make the initial diagnosis and explain it.

What is pathogenesis of the disease?

Make differential diagnosis.

What is emergency care in this situation?

What recommendations will you give later?

Test

1. Breastfeeding N 12 https://sdo.pimunn.net/mod/quiz/view.php?id=111848
2. Malnutrition N 14 https://sdo.pimunn.net/mod/quiz/view.php?id=123020
3. Neonatology N 10 https://sdo.pimunn.net/mod/quiz/view.php?id=46936
4. Atopic Dermatitis, Rickets, Anemia N 15 https://sdo.pimunn.net/mod/quiz/view.php?id=59953
5. Pneumonia N 10 https://sdo.pimunn.net/mod/quiz/view.php?id=163405
6. Asthma N8 https://sdo.pimunn.net/mod/quiz/view.php?id=123571
7. Cardiology N 12 https://sdo.pimunn.net/mod/quiz/view.php?id=144850
8. Hematology N 10 https://sdo.pimunn.net/mod/quiz/view.php?id=144815
9. The Quiz knowledge on Colic baby and Gas N 10 https://sdo.pimunn.net/mod/quiz/view.php?id=163262
10. Nephrology N 12 https://sdo.pimunn.net/mod/quiz/view.php?id=144813
11. Vaccination N 17 https://sdo.pimunn.net/mod/quiz/view.php?id=149818

4. The content of the assessment tools of entry, current control

Entry /current control is carried out by the discipline teacher when conducting classes in the form of: assessment tool 1, assessment tool 2, etc. *(list the forms, for example, control work, organization of a discussion, round table, abstract, etc.)*

Assessment tools for current control.

Assessment tools 1

1. Individual survey
2. Interview
3. Test

Assessment tools 2

1. Control work
2. Interview
3. Test

Assessment tools 3

1. Situational task
2. Report
3. Test

(the teacher specifies all types of tasks for conducting current control, if this is provided for in the WPD, in the form given below as an example. The current control is carried out in the context of the assessment of competencies provided for in the WPD, and not topics or sections of the discipline)

4.1. Tasks for the assessment of competence "UC – 1, UC – 4, UC- 5, GPC – 4, GPC – 5, GPC- 7, GPC – 10, PC – 1, PC – 3, PC – 8, PC – 9" *(specify the competence code):*

Task 1 ***See situational task 1-50 (above)***

4.2. Control work for the assessment of competence " UC – 1, UC – 4, UC- 5, GPC – 4, GPC – 5, GPC- 7, GPC – 10, PC – 1, PC – 3, PC – 8, PC – 9" *(specify the competence code):*

Variant 1
Task 1 see interview 1-54 (above)
Task 2 see situational task 1-50 (above)
Example,
Task 1 Types of breast milk. Colostrum. Regulation of lactation. Recommendations for establishing of successful breast-feeding.
Task 2 A 3-year-old has had a loose cough without sputum for 2 months. The cough is getting worse, especially at night. It keeps his parents awake although the child sleeps through the cough. Family history revealed that the mother has eczema and the father has had "hay fever."
Questions:
Make the initial diagnosis and explain it.
What is etiology and pathogenesis of the disease?
What laboratory and instrumental tests will confirm the diagnosis?
What are main principles of therapy?
What is a prognosis?

4.3. Questions for colloquiums, interviews *(specify the competence code* UC – 1, UC – 4, UC- 5, GPC – 4, GPC – 5, GPC- 7, GPC – 10, PC – 1, PC – 3, PC – 8, PC – 9*): **see interview 1-54 and situational task 1-50 (above, in 3 point)***

4.4. Tasks (assessment tools) for the exam/credit
The full package of examination tasks/tasks is given *(specify the competence code* UC – 1, UC – 4, UC- 5, GPC – 4, GPC – 5, GPC- 7, GPC – 10, PC – 1, PC – 3, PC – 8, PC – 9*):*

Control quiestions
Nutrition.

1. Exclusive breast-feeding. Definition. Benefits of breast-feeding and breast milk. Types of breast milk. Colostrum. Signs of successful breast-feeding.
2. Findings of readiness for complementary food introduction. Supplementation. Definition. Example. Date of introduction complementary foods. Solid food introduction during first year of life.
3. Artificial feeding. Definition. Harm of cow's milk. Content of human and cow's milk. List types of infant formula

Neonatology.

4. Normal and abnormal gestational periods. Features of cardiovascular system of newborn children. Low-birth-weight infants, definition. Risk factor of low birth weight.

5. Physical examination of skin in newborn children. Physiological jaundice. Physical examination of head and face, chest and heart, abdomen, kidneys, genitalia, extremities in newborn children. Newborn's reflexes.
6. Perinatal asphyxia. Etiology of asphyxia. Effects of asphyxia. Apgar score. Posnatal symptoms of asphyxia. Resuscitation.
7. Respiratory distress syndrome. Definition. Pathophysiology. Clinical manifestation. Preventions and treatment.
8. Birth trauma. Risk-factors. Types of extracranial hemorrhage. Types of intracranial hemorrhage, common clinical features.
9. Birth trauma. Risk-factors. Facial nerve injuries. Management.
10. Bilirubin metabolism in newborn infants. Features of nonphysiologic hyperbilirubinemia. Indirect unconjugated hyperbilirubinemia. Hemolytic disease of newborns. Types. Pathophysiology. Clinical features, classification. Laboratory tests. Treatment. Direct conjugated hyperbilirubinemia.

Diseases of infants.

11. Phisical development. The main indexes of phisical development. Neuropsychic development. What factors influence on the body's height and body's weight of a child. Reasons of violation of body 's height and body's weight.
12. Malnutrition. Etiology. Physical sings of nutritional deficiency disorders. Nutrition assessment. Protein – energy malnutrition. Kwashiorkor.
13. Rickets. Classification. Clinical manifestation and treatment of vitamin D-deficiency rickets.
14. Anemia. Classification. Clinical features and treatment iron deficiency anemia.
15. Atopic dermatitis. Definition. Clinical manifestation. Pharmacological treatment.
16. Malabsorbtion syndrom. Celiac disease. Lactose intolerance. Cystic fibrosis. Etiology. Clinical manifestation. Laboratory investigation. Treatment.

Disorders of respiration

17. Morphological and functional features of respiratory system in children. Manifestation and evaluation of pulmonary diseases. Diagnostic methods.
18. Pneumonia. Definition. Etiology. Common causes of pneumonia at different ages. Clinical manifestation and laboratory findings of bacterial pneumonia in children < 6 years old, > 6 years old. Treatment
19. Asthma. Definition. Epidemiology. Pathophysiology. Risk-factors for the development of asthma. Classification. Clinical manifestation and laboratory findings. Treatment.

Cardiology.

20. Morphological and functional features of cardiovascular system in children. Evaluation of the cardiovascular system.
21. Etiology and epidemiology of congenital heart diseases. Clinical manifestation and laboratory tests of acyanotic CHD.
22. Congenital heart diseases. Epidemiology. Etiological aspect of congenital heart diseases.
23. Ventricular septal defect. Clinical manifestation. Laboratory signs. Treatment.
24. Atrial septal defect. Clinical manifestation. Laboratory signs. Treatment.
25. Patent ductus arteriosus. Clinical manifestation. Laboratory signs. Treatment.
26. Coarctation of aorta. Clinical manifestation. Laboratory signs. Treatment.
27. Tetralogy of Fallot. Description. Clinical manifestation. Laboratory signs. Treatment and prevention of the hypoxemic spells.
28. Primary myocardial diseases. Cardiomyopathy (dilated and hypertrophic). Etiology. Clinical manifestation. Treatment.
29. Congestive heart failure. Clinical manifestation. Treatment.

Renal diseases.

30. Approach to the child with hematuria.
31. Acute poststreptococcal glomerulonephritis. Etiology. Clinical manifestation. Laboratory tests. Treatment.
32. Approach to the child with proteinuria.

33. Nephrotic syndrome. Minimal change nephrotic syndrome of childhood. Clinical manifestation. Laboratory investigation. Treatment.
34. Urinary tract infection. Urinary tract infection. Pyelonephritis. Cystitis. Etiology. Clinical manifestation. Laboratory tests. Treatment.
35. Chronic renal failure.

Hematology.

36. Anemia. Definition. Etiology. Classification.
37. Iron deficiency anemia. Etiology. Clinical manifestation. Treatment.
38. Thalassemia. Definition. Epidemiology.
39. Thrombocytopenia. Idiopathic thrombocytopenia. Etiology. Clinical manifestation. Treatment.
40. Hemophilia. Definition. Clinical manifestation. Treatment.

Gastroenterology.

41. Acid peptic disease. Etiology. Clinical manifestation. Treatment.
42. Gastroesophageal reflux. Reasons. Clinical manifestation. Treatment.
43. Ulcer disease. Etiology. Clinical manifestation. Diagnosis.
44. Infantile colics. Etiology. Clinical manifestation. Diagnosis.

Infectious diseases.

45. Acute diarrhea. Definition. Causes. Epidemiology. Complications.
46. Salmonellosis. Etiology. Clinical features. Treatment.
47. Shigellosis. Etiology. Clinical features. Treatment.
48. Viral diarrhea (rotavirus)
49. Escherihia coli. Four pathogenic types. Associated illnesses. Therapy and prevention.
50. Toxicosis. Exicosis. Definition. Causes.
51. Dehydration. Types of dehydration.
52. Chronic diarrhea. Definition. Causes. Epidemiology. Complications.
53. Active and passive immunization in children. Principles of vaccination in children.
54. Active immunization of child. Recommended childhood immunization schedule.
55. Adverse effects of vaccination. Complications. Anaphylactic shock. Management.

Case 1

A 12-month-old infant is admitted to the hospital because of dehydration and diarrhea of 3 days' duration. The infant weighed 10 kg at a well visit 1 week ago. She has had 10 to 12 stools per day for the past few days and a temperature of 39°C. She has not urinated for the past 18 hours. Physical examination reveals sunken eyes and dry, tenting skin. Which of the following would you do first?

A. Order a complete blood count and blood cultures.
B. Obtain a urine specimen for culture, electrolytes, and specific gravity.
C. Begin lactated Ringer solution, 20 mL/kg intravenously, after obtaining blood for electrolytes and blood urea nitrogen.
D. Obtain stool for fats, reducing subtances, and culture.

Questions:

1. Make the initial diagnosis.

Assuming 10% dehydration, the best way to monitor initial improvement in the child in a previous question is by measuring

A. weight gain
B. urinary output
C. central venous pressure
D. blood pressure

Questions:

1. Main principle of IV rehydration therapy.

Case 2

A 900-g infant of 27 weeks' gestational age developed respiratory distress syndrome and required endotracheal intubation on the first day of life. At 36 hours of age, the infant developed hypotension, bradycardia, cyanosis, and a tense anterior fontanel. The most appropriate diagnostic test is

A. electroencephalography
B. echocardiography
C. serum coagulation profile
D. ultrasonography of the head
E. complete blood count with platelet determination

Questions:

1. What does mean the RDS 1 type?
2. Assessment of severity of hypoxia?
3. Make the initial diagnosis.

Case 3

A 42-week-gestational-age, 3600-g, breast-fed, white female is noted to have persistent hyperbilirubinemia at 2 weeks of age. On physical examination, the infant has not gained weight since birth and has decreased tone, an umbilical hernia, and an anterior fontanel measuring 4X6 cm. The most likely diagnosis is

A. Crigler-Najjar syndrome
B. Gilbert disease
C. biliary atresia
D. hypothyroidism
E. galactosemia

Questions:

1. Approach to the newborns with neonatal hyperbilirubinemia.

Case 4

A 4-week-old, A-positive, African-American, former 40-week-gestational-age infant was born to an O-positive mother and developed hyperbilirubinemia requiring 2 days of phototherapy in the newborn nursery after birth. The infant appears apathetic and demonstrates pallor, a grade 2/6 systolic ejection murmur, and a heart rate of 175. The most likely diagnosis is

A. anemia of chronic disease
B. cholestasis secondary to neonatal hepatitis
C. hereditary spherocytosis
D. sickle cell anemia hemolytic crisis
E. ABO incompatibility with continued hemolysis

Questions:

1. Approach to the newborns with neonatal hyperbilirubinemi

Case 5

A 15-year-old girl has experienced loss of 30 pounds during the past 6 months and has developed amenorrhea. She denies vomiting, diarrhea, and abdominal pain and claims to feel well. Physical examination reveals cachexia and a pulse of 40 per minute. Electrolyte determination reveals a serum potassium level of 3.0 and bicarbonate of 30. Hematocrit is 30, and eryfhrocyte sedimentation rate is 3 mm/hour. The most likely cause of this patient's condition is

A. inflammatory bowel disease
B. anorexia nervosa
C. bulimia nervosa
D. Addison disease
E. pituitary adenoma

Questions:

1. Make the initial diagnosis.
2. Main principle of diet for the child with malnutrition?

Case 6

A 12-year-old with repeated episodes of streptococcal pharyngitis develops another episode of sore throat. The rapid strep test is positive, and oral ampicillin is started, with the first dose given in the office. One hour later, she develops a funny feeling and a tingling sensation around her mouth. Next she becomes apprehensive, has difficulty swallowing, and develops a hoarse voice. On arrival at the emergency room, she has giant urticaria and the following vital signs: pulse 130, respiratory rate 32, blood pressure 70/30, and temperature 37.2^0C. The most appropriate therapy is

A. epinephrine
B. prednisone
C. Benadryl
D. cimetidine
E. lactated Ringer solution

The most likely diagnosis for the condition described in a previous question is

A. streptococcal toxic shock
B. scarlet fever
C. infectious mononucleosis
D. anaphylaxis
E. serum sickness

Questions:

1. emergency care of this situation?

Case 7

A l4-year-old white female with the diagnosis of severe recurrent reactive airway disease since age 1 year comes to the emergency room with fever and cough for 2 weeks. The child has purulent sputum, bilateral wheezing, and rales but is not "tight." Her weight is below the fifth percentile, she has no secondary sex characteristics, and mild digital clubbing is noted. The most likely diagnosis is

A. steroid'dependent asthma
B. cystic fibrosis
C. allergic bronchopulmonary aspergillosis
D. tuberculosis
E. celiac disease
F. foreign body aspiration

Questions:

1. Make the initial diagnosis.
2. Main etiological and pathogenetic mechanisms of this disease?
3. Main principle the treatment of this disease?

Case 8

A 12-year-old presents with sneezing, clear rhinorrhea, and nasal itching. Physical examination reveals boggy, pale nasal edema with a clear discharge. The most likely diagnosis is

A. foreign body
B. vasomotor rhinitis
C. neutrophilic rhinitis
D. nasal mastocytosis
E. allergic rhinitis

Two weeks later, the patient described in a previous question complains of headache, poor nasal airflow (mouth breathing), fever, and a change in the nature of the nasal discharge; it is now mucopurulent. The most likely diagnosis is

A. sinusitis
B. foreign body
C. rhinitis medicamentosa
D. choanal stenosis
E. ciliary dyskinesia

Questions:

1. Main principle the treatment of this disease?

Case 9

A child has abdominal pain, arthritis, microscopic hematuria, and a purpuric rash only on the lower extremities. Which of the following is the most likely diagnosis?

A. Meningococcemia
B. Varicella
C. Henoch-Schonlein vasculitis
D. Poststreptococcal glomerulonephritis
E. Infectious mononucleosis

Questions:

1. Make the initial diagnosis.
2. Main etiological and pathogenetic mechanisms of this disease?
3. Main principle the treatment of this disease?

Case 10

A 5-year-old boy develops severe abdominal pain of 3 days' duration. He is unable to eat and has occasional emesis. Physical examination reveals an anxious, acutely ill child with generalized abdominal tenderness, voluntary guarding of the anterior abdominal muscles, and normal findings on rectal examination. A surgical consultant believes the child has an acute abdomen, possibly appendicitis. Before the child is sent to the operating room, the urinalysis reveals 3 + hematuria and 1 + proteinuria. You should

A. perform coagulation studies
B. obtain a complete blood count
C. perform renal ultrasonography
D. proceed with the operation
E. cancel the operation

On repeat physical examination, the patient described in a previous question now has petechiae over the dorsal surfaces of the feet and hands and over the buttocks. His platelet count is 350,000. The most likely diagnosis is

A. Kawasaki syndrome
B. Henoch-Schonlein purpura
C. Rocky Mountain spotted fever
D. meningococcemia
E. appendicitis with gram-negative sepsis

Questions:

1. Make the initial diagnosis.
2. Main principle the treatment of this disease?

Case 11

A 2-year-old male comes to your office with profuse watery diarrhea. His father just returned from a trip to St. Petersburg, Russia, and has been suffering from diarrhea for more than a week. His physician diagnosed Cryptosporidium infection on stool examination. Which of the following steps would be appropriate?

A. Begin the patient on sulfamethoxazole.
B. Discuss aggressive oral rehydration with the child's mother to prevent dehydration.
C. Send off three stool specimens for culture.
D. Arrange for endoscopy and biopsy.
E. Request an infectious disease consultation.

Questins:

1. Main principle of oral rehydration therapy for the child of the 1st year of life?
2. Main principle the treatment of this diseases?

Case 12

A 6-month-old breast-fed infant presents with a 24-hour history of diarrhea but no emesis. On examination, the child is afebrile, has normal vital signs, but has slightly sunken eyes and fontanel. She continues to nurse fairly well. The most appropriate therapy is

A. slow intravenous rehydration and nothing by mouth

B. clear liquid diet for 24 hours, followed by dilute formula or breast milk for several days until stools reduce in frequency

C. rapid infusion of intravenous saline

D. oral electrolyte solution given by mouth to make up a 5% to 10% volume deficit over 6 hours and continuation of breastfeeding

E. begin tincture of opium or Imodium

Question:

1. Main principle of oral rehydration therapy for the child of the 1st year of life?

Case 13

A previously healthy, well-developed 6-month-oid infant develops diarrhea that proves to be due to rotavirus infection that lasts 3 weeks and requires treatment with intravenous and oral rehydration fluids. Thereafter, the infant is again fed with the regular infant formula that was used before this illness. Each time the infant receives this formula, the infant develops watery diarrhea, which is now rotavirus negative. The most likely diagnosis is

A. stagnant bowel syndrome

B. primary disaccharidase deficiency

C. pancreatic insufficiency

D. dumping syndrome

E. secondary lactase deficiency

F. milk protein allergy

Questions:

1. Laboratory test for confirming of diagnosis?
2. Main principle of therapy?

Case 14

A telephone call comes from the mother of a 19-month-old infant who was fine (except for an upper respiratory tract infection last week) until 6 hours ago, when he suddenly began screaming every 10 minutes. He is afebrile; he vomited twice but has no diarrhea, although he clearly has cramping abdominal pain. Which one of the following would you do?

A. See the child immediately.

B. Recommend clear fluids and see the child in the morning.

C. Prescribe an antispasmodic, anticholinergic drug and see the child if he does not improve.

D. Suggest a tap water enema.

E. Refer the mother to a surgeon.

On physical examination of the child described in a previous question, you feel a mass in the right upper quadrant. You find bloody stool in the rectum. The most likely diagnosis

A. appendicitis

B. gastroenteritis (Shigella)

C. gastroenteritis (viral)

D. intussusception

E. Meckel diverticulum

Questions:

1. Approach to the patients with acute abdominal pain?

Case 15

A 2-year-old previously well male is brought to you with cough and fever. His history unremarkable. Physical examination revels toxic, ill child with fever, dyspnea, and decreased breath sounds in the right middle lung fields. Posteroanterior and lateral CHEST radiographs reveal an infiltrate in the right middle lobe. His left lung is clear. Leukocyte count is 19,000/mm^3 with 54% polymorphonuclear neutrophils, 18% bane forms, and 28% lymphocytes. The child is admitted to the hospital. Which of the following would you do first?

A. Repeat the leukocyte count.
B. Obtain a blood culture.
C. Obtain a throat culture.
D. Obtain a radiograph of his sinuses.
E. Schedule bronchoscopy.

Questions:

1. Make the initial diagnosis.
2. Main principle of therapy?

Which antibiotic would you choose for the patient?

A. Methilcillin
B. Ceftriaxone
C. Gentaniicin
D. Penicillin
E. Tetracycline

The patient is discharged after 3 days of using oral antibiotics. He fares well until 2 weeks later, when 4 days after stopping antibiotics his cough becomes worse. You should now

A. begin steroids

B. order a sweat chloride test

C. perform bronchoscopy

D. order a lung biopsy

E. order a leukocyte count and blood culture

Which of the following is the most likely diagnosis for this patient?

A. α_1-Antitrypsin deficiency
B. Tuberculosis
C. Foreign body in the right mainstem bronchus
D. Pneumocystis carinii pneumonia
E. Congenital lung cyst

Case 16

A 3-year-old has had a loose cough without sputum for 2 months. The cough is getting worse, especially at night. It keeps his parents awake although the child sleeps through the cough. Family history revealed that the mother has eczema and the father has had "hay fever." Additional historical facts that should be elicited to determine whether this represents, serious illness include all of the following EXCEPT

A. reduced exercise tolerance
B. failure to gain weight
C. chronic diarrhea
D. persistent fevers

E. serous otitis media

2. None of the additional symptoms listed in question is present. On physical examination, you hear an occasional wheeze in both lung fields. Other physical findings that would be indicative of chronic lung disease include which of the following? (Choose one or more.)

A. Posterior pharyngeal drainage

B. Hyperexpansion of the chest with an increased anteroposterior diameter

C. Clubbing

D. Tachypnea

E. Cyanosis

3. The patient described in questions has none of the findings indicative of chronic lung disease. What would be the most likely diagnosis at this time?

A. Bronchiectasis

B. Pertussis

C. Foreign body aspiration

D. Asthma

E. Interstitial pneumonia

Case 17

An 18-month-old is noted to assume a squatting position frequently during play time at the daycare center. The mother also notices occasional episodes of perioral cyanosis during some of these squatting periods. The day of admission, the child becomes restless, hyperpneic, and deeply cyanotic. Within 10 minutes, the child becomes unresponsive. The most likely underlying lesion is

A. cardiomyopathy
B. anomalous coronary artery
C. tetralogy of Fallot
D. cystic flbrosis
E. aspiration pneumonia

Questions:

1. What factors which may lead to this situation?
2. Emergency care of this situation?

Case 18

A 4-month-old infant is noted to have a grade 4 holosystolic murmur that is harsh over the left parasternal border. Results of both the chest radiograph and ECG are normal, and the child is otherwise asymptomatic. The most likely cause of this murmur is

A. large VSD with 3:1 shunt
B. an ASD secundum defect
C. a small VSD
D. pulmonic stenosis
E. pink tetralogy of Fallot

Questions:

1. Classification of CHD?
2. Hemodynamic features in this defect?

Case 19

A previously well 3 1/2-month-old presents with poor feeding, diaphoresis during feeding, and poor growth. Vital signs reveal respirations of 70, pulse of 175, and blood pressure of 90/65 mm Hg in the upper and lower extremities. The cardiac examination reveals a palpable parasternal lift and a systolic thrill. A grade 4 holosystolic murmur and a middiastolic ramble are noted. The chest radiograph reveals cardiomegaly. The most likely diagnosis is
A. cardiomyopathy
B. myocarditis
C. VSD
D. coarctation of the aorta
E. transposition of the great arteries

Questions:

1. Classification of CHD?
2. Hemodynamic features and clinical symptoms in this defect?

Case 20
A 12-year-old female is noted to have a blood pressure of 170/110 mm Hg during a routine grade physical examination for school sports participation. She is asymptomatic but has been noted to have a grade 1-2/6 short systolic murmur at the left sternal border. The next important step in her evaluation should include
A. chest radiograph
B. ECG
C. funduscopic examination
D. lower extremity blood pressure
E. a tilt test

Questions:

1. Make the initial diagnosis.
2. Additional investigation for confirming of this disorders?

Case 21
A 5-year-old white female has multiple bruises on her lower extremities and oral-mucosal bleeding of 3 days' duration. Two weeks before these signs, she had a mild respiratory tract infection. Physical examination reveals multiple ecchymoses and petechiae; no lymphadenopathy or hepatosplenomegaly is noted. The next diagnostic step is
A. a complete blood count
B. a piotbrotnbin time
C. a bleeding time
D. a partial thromboplastin time
E. an antinuclear antibody titer

Questions:

1. Make the initial diagnosis.
2. Clinical signs and symptoms of this disease
3. Main principle of therapy

Case 22
A 10-month-old white male presents with a 1-day history of persistent bleeding after cutting his lip slightly. The family history is unremarkable, and the patient is receiving no medications. Laboratory data reveal a hemoglobin value of 11 g/dL, platelets of 350,000, a prothrombin time of 11.8 seconds, and a partial thromboplastin time (PTT) of 100 seconds, which is corrected by mixing of normal plasma. The most likely diagnosis is
A. von Willebrand disease

B. hemophilia A
C. Hageman factor deficiency
D. scurvy
E. anticardiolipin antibody syndrome

Questions:
1. Make the initial diagnosis.
2. Clinical and laboratory signs of this disease?

Case 23
A 1-year-old presents with pallor of 3 months' duration. Past medical history reveals neonatal hyperbilirubinemia that was treated with phototherapy for 1 week and a father who had a splenectomy at the age of 2 years for unknown reasons. On physical examination, the child is pale and has splenomegaly (4 cm below the left costal margin). The most likely diagnosis is
A. sickle cell anemia
B. thaiassemia
C. paroxysmal nocturnal hemoglobinuria
D. spherocytosis
E. Diamond-Blackfan syndrome

Questions:
1. Etiology of this disease
2. Clinical manifestation of this disease
3. Main principle of therapy.

Case 24
An 18-month-old Caucasian male is brought to your office for a routine health maintenance visit. The mother reveals that the child always appears hungry; in fact, he drinks a quart of whole milk a day and also eats dirt. Intake of solid foods is sporadic, but the mother states that she thought all 18-month-olds were "picky eaters." Physical examination reveals mild pallor of the conjunctivae. He has no hepatosplenomegaly, and the rest of the examination findings are normal. Based on the information, which of the following would be the most likely to determine the diagnosis?
A. Complete blood count, including blood smear
B. Reticulocyte count
C. Lead screen
D. Ophthalmologic consultation
E. Testing stools for occult blood

A blood smear taken from the patient described in a previous question shows a microcytic hypochromic anemia. Iron supplementation therapy is started. When will the reticulocyte response be maximum?
A. 1 to 2 days
B. 5 to 7 days
C. 14 to 21 days
D. 3 to 4 weeks
E. About 6 weeks

In the patient described in a previous questions, when the hemoglobin and hematocrit return to normal, which should be done?
A. Stop iron supplementation
B. Continue iron for 1 to 2 weeks
C. Continue iron for 4 to 8 weeks
D. Continue iron for 4 to 6 weeks

Case 25
A 4-year-old child of Thai parents exhibits pallor and hepatosplenomegaly. His blood count shows a hemoglobin value of 5.0 g/dL and MCV of 55 fL. His blood smear shows severe anisopoikilocytosis, and his serum ferritin level is within the range of normal for his age. Which of the following are likely possible causes of this child's anemia?
A. a-Thalassemia
B. Hemoglobin E
C. β -Thalassemia
D. Sickle cell anemia
E. Choices A, B, and C above

Questions:
Main laboratory criteria for this blood disorders.

Case 26
A 4-year-old male developed an upper respiratory tract infection that was followed in 2 weeks by general edema. His blood pressure is normal. Urinalysis reveals 2 to 5 red blood cells per high-power field and 4 + protein. His BUN is 19 mg/dL, creatinine 0.6 mg/dL, cholesterol 402 mg/dL, serum albumin 0.9 g/ dL, antistreptolysin O titer 1:16, and C3 92 mg/dL. The most likely diagnosis would be
A. poststreptococcal glomerulonephritis
B. membranous glomerulonephritis
C. minimal lesion nephrotic syndrome
D. membranoproliferative glomerulonephritis
E. focal sclerosis

Questions:
1. Main pathogenetic mechanism of this disease development
2. Main principle of therapy.

Case 27
A 3-year-old female presents with vomiting, diarrhea, and fever. A urinalysis shows pyuria and hematuria, and a culture grows greater than 10^5 colonies of E. coli. She responds well to hydration and intravenous antibiotics. What imaging studies, if any, are appropriate during the acute phase of the infection?
A. Renal and bladder ultrasonography
B. intravenous urogram
C. VCUG
D. CT scan of the abdomen
E. None

Questions:
1. Make the initial diagnosis.
2. Additional laboratory test for confirming of this disease.
3. Main therapeutic principles.

Case 28
An infant is brought to the emergency room with vomiting, lethargy, dehydration, and failure to thrive. Intravenous administration of fluids is begun. Serum electrolyte values are sodium 124 mEq/L, chloride 88 mEq/L, and potassium 6.8 mEq/L. Serum glucose level is 35 mg/dL. The child is hypotensive and has areas of hyperpigmentation. The most likely diagnosis is
A. Addison disease
B. Waterhouse-Friderichsen syndrome

C. 17-hydroxylase deficiency
D. Gushing syndrome
E. adrenoleukodystrophy

Treatment for the infant described in a previous question should include which of the following? (Choose as many as are appropriate.)
A. Desoxycorticosterone acetate (DOCA)
B. Hydrocortisone hemisuccinate
C. Adrenalectomy
D. Insulin
E. Glucagon

Case 29

The boy of 12 years old, was admitted to the clinic with the complaints of pains in lumbar area, frequent urination, with small portions.

The child was born from the second pregnancy, which was complicated by nephropathy. The child was born in time. The weight at birth was 3500 g, length was 53 cm. The boy was sick from birth, the analyses of urine was marked by leukocyturia. There were periods of temperature rising up to 38,6 C°.

The boy was examined in a hospital at the age of 2 years. The vesicoureteral reflux of I-II degrees was defined. The child was observed by the doctor regulary. Leukocyturia and bacteriuria were determined repeatedly.

Medical examination

The skin was pale, there was no edema. The mucous of the oral cavity was clean. Vesicular respiration was defined in the lungs. There were no rales. Cardiac sounds were rhythmical, without murmur. Abdomen was soft, painless. Pasternatsky sign was positive from the both sides.

Investigation

CBC: Le - 11,0·10^9/L: Ne - 81%, Ly - 19%, ESR - 25 mm/h.

Urinalysis: protein - 0,33 g/L, Le - 100 per high-power field, Er - 1-2 per high- power field, bacteriuria.

Renal ultrasonography: outlines of kidneys were rough. The right kidney was condensed, the frame of the kidney was broken.

Assignment

1. Make the initial diagnosis.
2. What functional methods of research are necessary for confirming the diagnosis?
3. To prescribe treatment.

Case 30

The girl of 12 years old, was sick for 1 year, complained of fasting pains in epigastric area, which occured in the morning and in 1,5-2 hours after meal, at night, it disappeared after meals. The acidic regurgitation was disturbed. The mother of the child had peptic ulcer in the anamnesis, the father had gastritis.

Medical examination

Physical development was normal. The skin and mucosas of the oral cavity were clean. On palpation abdomen was intense, morbid in the epigastric area and in the pyloroduodenal zone. The liver was not enlarged, painless. There were no pathologies in other organs.

Investigation
CBC: Hb - 128 g/L, Er - 4,2·10^12 /L, color index - 0,91, Le - 7,2·10^9/L.
Urinalysis is normal.
Ultrasonic investigation: The liver was not enlarged. The gallbladder had strangulation. The pancreas had homogeneous structure.

Assignment
1. Make the initial diagnosis.
2. What researches are necessary for confirming the diagnosis?
3. What does irradication of Helicobacter pylori mean?

Case 31

The boy of 1 year and 2 months old, was admitted to the hospital with the complaints of poor appetite, the child had fatigue, and perversion of taste (pica).

The child was from the first pregnancy. The mum had anemia, during pregnancy. The child was born with weight of 3150 g, length of 51 cm.

The child had breastfeeding for 2 months. Then he received cow's milk, porridges, cottage cheese, and vegetable mashed potatoes. The boy began to receive meat only since 11 months.

Medical examination

At admission to the hospital his general condition was of moderate severity. The skin was clean, pale. Mucous of oral cavities was clean, pale. The conjunctivas of eyes were pale. Cardiac sounds were rhythmical. The systolic murmur was auscultated, on the apex of the heart. Abdomen was soft, painless, liver projected from the superior border of the rib arch for 3 centimeters. The spleen was unpalpable.
Investigation
CBC: Hb - 85 g/L, Er - 2,8·10^12/L, Ret - 1,9%, colour index 0,71, Le - 7,2·10^9/L, ESR - 6 mm/h.
Blood chemistry: total protein - 68 g/L, iron of serum - 7 mcmol/L (N - 10,4 -14,2 mcmol/L), total iron binding capacity – 75,8 mcmol/L (N – 54-72 mcmol/L).

Assignment
1. Make the initial diagnosis.
2. What reasons are promoted for the development of the disease?
3. What treatment is necessary for the child?

Case 32

The boy of 3 month old had the expressed xeroderma, itching on cheeks, hyperemia, crack, vesicular eruption.

From anamnesis: the first symptoms appeared after the first introduction of milk formula as cheeks redness and itching.

Medical examination

Physical development was normal. The skin was dry. There were hyperemia, dryness and infiltration of cheeks. Respiratory sounds were normal. Cardiac sounds were rhythmical. Abdomen was soft, painless. Stool was normal.

Investigation

CBC: Hb - 122g/L, Er - 3,2·10*12/L, Le - 7,0·10*9/L, ESR - 6 mm/h.

Immunology: IgE – 910 IU/l (normal level up to 100 IU/l)

Assignment

1. Make the initial diagnosis
2. What are the most important causes of the disease?
3. What treatment would you recommend for this child?

Case 33

The child of 3 years old fell ill acutely. There was runnig temperature up to 39ºC, dry, painful cough, and headache.

The child was from the first pregnancy, the pregnancy was with toxicosis. The child had respiratory distress syndrom in the newborn period. The child was frequently ill with acute respiratory infections. He had tonsillitis, chickenpox, and rubella.

Medical examination

General condition was serious. The skin was pale, nasolabial cyanosis of triangle was determined. Mucous of oral cavities was clean, dry. Respiration was "grunting respiration", the number of respiratory movements was 62 for once minute. The chest was enlarged in the front - back size, the right part of the chest slowed down in respiration. On percussion the area of dull percussion was defined in the right side. On auscultation bronchial breath sounds, diminished breath sounds in the right side and fine moist rales were determined. The cardiac sounds were clear, clean. The stomach was soft, painless. The liver was determined near the edges of the rib.

Investigation

CBC: Hb -105 g/L, Er - 3,5·10^12/L, Le - 18,6·10^9/L, ESR - 28 mm/h.

Chest X-ray: the intensive darkness was marked in the area of VIII -IX segments of the right lung.

Assignment

1. Make the initial diagnosis
2. Name the main principles of antibacterial therapy of this disease.
3. What complications of the disease do you know?

Case 34

The boy of 4 days old was admitted to the clinic with the expressed jaundice. The mother was 23 years old, she had 0(I), Rh-negative blood group. The father of the child had A (II) Rh-negative blood group. The first pregnancy was completed by the medical abortion at the period of 10 weeks. It was the second pregnancy; there was toxicosis in the second period of pregnancy. It was full term pregnancy. The birth weight of the child was 3200 g, the length of the body was 52 cm. The child cried at labor at once, the cry was loud. The yellowness of the skin and scleras was marked to the end of the first day. The jaundice increased amplified to the second day.

Medical examination

At admission to the hospital the state of the child was serious; it was defined by expressed jaundice of the skin and scleras. The child was flaccid, there was marked hypotonia of

muscles, hyporeflexia. The liver was enlarged from the margin of the rib arch for 3 cm, the spleen was near the margin of the rib arch for 1 cm. The boy has A (II) Rh -negative blood group.

Investigation

CBC: Hb - 141 g/L, Er - 3,9·10^12/L, Le - 4,9·10^9/L, ESR - 2 mm/h.

Blood chemistry (on the second day of life): total protein - 54 g/L, indirect bilirubin - 180 mcmol/L, direct bilirubin - was not present.

Assignment

1. Make the initial diagnosis
2. What inspections are necessary for determining the correct diagnosis?
3. What blood group does this child have?

Case 35

The girl of 13 years old, was admitted to the hospital with the complaints of polyarthralgia during last 4 months, the child had a prolonged subfebrile condition, fatigability.

Before the onset of the disease the patient had preceding acute respiratory viral infection, which was accompanied by high fever. The subfebrile fever was preserved after the survived infection.

Medical examination

The condition of the child was moderate. On the face there were erythematic lesions, mainly on the cheeks and on the nose. The radiocarpal, ulnar, and talocrural joints were changed, tumescence and morbidity were defined. The respiration was vesicular. The cardiac sounds were rhythmical. There were no pathological murmurs. The palpation of the abdomen was soft and painless, the liver and spleen were not enlarged.

Investigation

CBC: Hb - 100 g/L, Er - 4,2·10^12/L, Le - 15·10^9/L, E SR - 50 mm/h.

Urinalysis: specific gravity - 1012, protein - 0,33 g/L, Le - 3-6 per high-power field, Er - 20-25 per high-power field.

Blood chemistry: common protein-83g/L, albumin - 46 %, γ-globulin - 32%.

Assignment

1. Make the initial diagnosis.
2. What additional inspections are necessary to confirm the diagnosis of the patient?
3. What is the treatment of choice?

Case 36

The boy of 11 months old, was admitted to the hospital with the complaints of physical development retardation (weight of the body was 7 kg), dyspnea, cyanosis around the mouth at physical exertion.

The child had poor weight gain since the age of 2 months. The child was not ill with bronchitis and pneumonia.

Medical examination

The skin was pale with cyanotic shade, peripheral cyanosis, signs of "drumstick", and "watch"s glasses ". The area of the heart was not changed visually. The borders of the heart were

defined - the left border – the midclavicular line, the right- the right parasternal line, the upper - second intercostals space. Cardiac sounds were normal, the heart rate - 140 per minute, respiratory rate - 40 per minute. The systolic murmur was auscultated along the left margin of sternum, the second heart sound was weakened in the second intercostal at the left side. Respiration was vesicular, there were no rales. The abdomen was defined at palpation as soft, and painless. The liver and spleen were not enlarged.

Investigation

CBC: Hb - 170 g/L, Er - 5,4·10^12/L, hematocrit - 45 % (normal - 47%), Le - 6,1·10^9/L, ESR- 2 mm/h.

Urinalysis is normal.

Blood chemistry: total protein - 69 g/L, urea nitrogen - 5,1 mmol/L, cholesterol - 3,1 mmol/L.

Assignment

1. Make the initial diagnosis.
2. What is the anatomy of the heart defect?
3. What additional researches are necessary for determining the diagnosis?

Case 37

The boy is of 4 months old. The child was born in time, the weight was 2600 g. Asphyxia was defined at birth. The child required resuscitation. From maternity house the child was admitted to the hospital with the diagnosis of pneumonia. The diagnosis of sepsis was made in the hospital. The child was treated in the hospital, then in the polyclinic. The inoculations were not made in the maternity home. Now this patient is healthy. He is in good condition.

Assignment

Prescribe the schedule of immunization for the first year of the child's life.

Case 38

The boy of 4 month old had insignificant xeroderma, hyperemia on the cheeks. The first changes on the skin appeared in 3 months of age, after introduction of infant formulae. The changes on the skin were expressed. The child had the expressed xeroderma, itching, and vesicular eruption in wrinkles of the skin. The patient received prolonged treatment which included a diet, antihistamine medicines, oils, creams. Now the boy has the period of remission of the pathological process. The child has the following inoculations: BCG, and two inoculations for hepatitis B.

Assignment

1. Give your suppositions about the diagnosis.
2. Prescribe the schedule of immunization for the first year of the child's life.

Case 39

The girl of 12 years old complained of fatigability, bad appetite, pain in ulnar, knee joints, running temperature. The girl had tonsillitis a month ago.

Medical examination

General state was moderate. The skin was pale. On face the hyperemia was not defined. Vesicular breath sounds were auscultated over lung fields. The heart borders: the right - the right border of the sternum, the upper border - between the second and the third ribs, the left -

3 cm to the left from the midclavicular line. On auscultation the systolic murmur were heard in the heart apex and in the Erba's point. Pulse was 108 beats per minute. The joints of ulnar and knee were hot and painful. The liver and spleen were not enlarged.

Investigation

CBC: Hb - 108 g/L, Er - 3,0·10^12/L, Le - 12,0·10^9/L , ESR - 28 mm/h.

Blood chemistry: total protein - 80 g/L, albumin - 46 %, γ-globulins - 25 %, C-reactive protein - positive.

Assignment

1. It is necessary to make the initial diagnosis
2. What analyses are necessary for determining the diagnosis?
3. What is the treatment of choice?

Case 40

The boy of 11 years old was admitted to the clinic with the complaints of edema, delicacy, poor appetite. The child had previous acute respiratory infection two months ago. The edema on the face, poor appetite appeared one week later. Then the edema appeared on the legs, on the abdomen.

Medical examination

The condition of the child was serious. The skin was pale, generalized edema was noticed on the face, legs scrotum and abdomen. Vesicular breath sounds were heard over lung fields. The cardiac sounds were moderately muffled. The blood pressure was 125/60. The abdomen was enlarged in size, there was edema. The liver was not enlarged. Urination was normal.

Investigation

CBC: Hb - 115 g/L, Er - $3,0 \cdot 10^{12}$/L, Le - $10,0 \cdot 10^{9}$/L, ESR - 42 mm/h.

Urinalysis: specific gravity - 1035, protein - 3,2 g/L, Le - 5-8 per high-power field, Er - 1-2 per high-power field.

Assignment

1. Give the initial diagnosis of the disease
2. What analyses are necessary for determining the diagnosis?
3. What is the treatment of choice?

Case 41

The boy of 8 month old was admitted to the hospital. At admission the mother said about the child's poor gain in weight, frequent cough, relapsing bronchitis. The mother marked the child's large volume liquid fatty stool. The pregnancy proceeded without complications, the child was born in time. At birth the weight of the child was of 3500 g, length 53 cm. The child had breastfeeding, complementery foods was started since 5 months. Now the weight of the child's body is 6300 g, length - 68 cm.

Medical examination

Current general condition of the child was serious. The skin was pale and clear. The subcutaneus fat was weak, on the chest it was absent. The turgor of tissues was reduced. The muscle tone was reduced. The hard respiration was defined in the lungs. Sounds were tympanic by percution of lungs. The cardiac sounds were rhythmical and clear. The stomach was enlarged in size. The

liver was palpable 3 cm out from the margin of the rib arc. Stool was 6 times per day, with large size, liquid.

Investigation

CBC: Hb - 105 g/L, Er - $3{,}0 \cdot 10^{12}$/L, Le - $7{,}2 \cdot 10^{12}$/L.

Chloridums of sweat - 95 mmol/L.

Chest X-ray - there was intensifying pulmonary drawing on all lungs fields. The sings of bronchitis are available.

Assignment

1. It is necessary to make the diagnosis.
2. It is necessary to determine physical development of the child, to define deficiency of body weight.
3. Define the main principles of therapy of the disease.

And then the tasks are specified for all competencies provided for this discipline.

5. The content of the assessment tools of mid-term assessment

Mid-term assessment is carried out in the form of an **exam** (leave the necessary).
The content of the assessment tool (questions, topics of abstracts, round tables, etc.)

If the bank of assessment tools for conducting current control and mid-term assessment of students in this discipline is presented on the Educational Portal of the PRMU, specify a link to this electronic resource.

5.1 The list of control tasks and other materials necessary for the assessment of knowledge, skills and work experience *(the teacher indicates only those tasks and other materials that are used within the framework of this discipline)*

5.1.1. Questions for the discipline exam __*PEDIATRICS*_____*(if there is a credit)*

Question	Competence code (according to the WPD)
1-55 see Exam questions above point 4.4	UC – 1, UC – 4, UC- 5, GPC – 4, GPC – 5, GPC- 7, GPC – 10, PC – 1, PC – 3, PC – 8, PC – 9
1-41 see cases above point 4.4	UC – 1, UC – 4, UC- 5, GPC – 4, GPC – 5, GPC- 7, GPC – 10, PC – 1, PC – 3, PC – 8, PC – 9

6. Criteria for evaluating learning outcomes

For the credit (example)

Learning outcomes	**Evaluation criteria**	
	Not passed	**Passed**
Completeness of knowledge	The level of knowledge is below the minimum requirements. There were bad mistakes.	The level of knowledge in the volume corresponding to the training program. Minor mistakes may be made
Availability of skills	Basic skills are not demonstrated when solving standard tasks. There were bad mistakes.	Basic skills are demonstrated. Typical tasks have been solved, all tasks have been completed. Minor mistakes may be made.

Availability of skills (possession of experience)	Basic skills are not demonstrated when solving standard tasks. There were bad mistakes.	Basic skills in solving standard tasks are demonstrated. Minor mistakes may be made.
Motivation (personal attitude)	Educational activity and motivation are poorly expressed, there is no willingness to solve the tasks qualitatively	Educational activity and motivation are manifested, readiness to perform assigned tasks is demonstrated.
Characteristics of competence formation*	The competence is not fully formed. The available knowledge and skills are not enough to solve practical (professional) tasks. Repeated training is required	The competence developed meets the requirements. The available knowledge, skills and motivation are generally sufficient to solve practical (professional) tasks.
The level of competence formation*	Low	Medium/High

***** - *not provided for postgraduate programs*

For the exam (example)

Learning outcomes	**Assessment of competence developed**			
	unsatisfactory	**satisfactory**	**good**	**excellent**
Completeness of knowledge	The level of knowledge is below the minimum requirements. There were bad mistakes	The minimum acceptable level of knowledge. A lot of light mistakes were made	The level of knowledge in the volume corresponding to the training program. A few light mistakes were made	The level of knowledge in the volume corresponding to the training program, without errors
Availability of skills	Basic skills are not demonstrated when solving standard tasks. There were bad mistakes	Basic skills are demonstrated. Typical problems with light mistakes have been solved. All tasks have been completed, but not in full.	All basic skills are demonstrated. All the main tasks have been solved with light mistakes. All tasks have been completed, in full, but some of them with shortcomings	All the basic skills were demonstrated, all the main tasks were solved with some minor shortcomings, all the tasks were completed in full
Availability of skills (possession of experience)	Basic skills are not demonstrated when solving standard tasks. There were bad mistakes	There is a minimal set of skills for solving standard tasks with some shortcomings	Basic skills in solving standard tasks with some shortcomings are demonstrated	Skills in solving non-standard tasks without mistakes and shortcomings are demonstrated
Characteristics of competence formation*	The competence is not fully formed. The available knowledge and skills are not	The formation of competence meets the minimum	The formation of competence generally meets the	The formation of competence fully meets the requirements. The

Learning outcomes	Assessment of competence developed			
	unsatisfactory	**satisfactory**	**good**	**excellent**
	enough to solve professional tasks. Repeated training is required	requirements. The available knowledge and abilities are generally sufficient to solve professional tasks, but additional practice is required for most practical tasks	requirements, but there are shortcomings. The available knowledge, skills and motivation are generally sufficient to solve professional tasks, but additional practice is required for some professional tasks	available knowledge, skills and motivation are fully sufficient to solve complex professional tasks
The level of competence formation*	Low	Below average	Intermediate	High

For testing:

Mark "5" (Excellent) - points (100-90%)
Mark"4" (Good) - points (89-80%)
Mark "3" (Satisfactory) - points (79-70%)

Less than 70% – Unsatisfactory – Mark "2"

Developer(s):
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