федеральное государственное бюджетное образовательное учреждение

высшего образования

«Оренбургский государственный медицинский университет»

Министерства здравоохранения Российской Федерации

**ФОНД ОЦЕНОЧНЫХ СРЕДСТВ**

**ДЛЯ ПРОВЕДЕНИЯ ТЕКУЩЕГО**

**КОНТРОЛЯ УСПЕВАЕМОСТИ И ПРОМЕЖУТОЧНОЙ АТТЕСТАЦИИ**

**ОБУЧАЮЩИХСЯ ПО ДИСЦИПЛИНЕ**

ПЕДИАТРИЯ

по направлению подготовки «Лечебное дело»

(факультет иностранных студентов)

31.05.01

Является частью основной профессиональной образовательной программы высшего образования по направлению подготовки («Лечебное дело»)

утвержденной ученым советом ФГБОУ ВО ОрГМУ Минздрава России

протокол № 8 от «25» марта 2016

Оренбург

1. **Паспорт фонда оценочных средств**

Фонд оценочных средств по дисциплине содержит типовые контрольно-оценочные материалы для текущего контроля успеваемости обучающихся, в том числе контроля самостоятельной работы обучающихся, а также для контроля сформированных в процессе изучения дисциплины результатов обучения на промежуточной аттестации в форме экзамена для студентов 5 курса и зачета для студентов 6 курса.

Контрольно-оценочные материалы текущего контроля успеваемости распределены по темам дисциплины и сопровождаются указанием используемых форм контроля и критериев оценивания. Контрольно – оценочные материалы для промежуточной аттестации соответствуют форме промежуточной аттестации по дисциплине, определенной в учебной плане ОПОП и направлены на проверку сформированности знаний, умений и навыков по каждой компетенции, установленной в рабочей программе дисциплины.

В результате изучения дисциплины у обучающегося формируются **следующие компетенции:**

ОПК-9 способностью к оценке морфофункциональных, физиологических состояний и патологических процессов в организме человека для решения профессиональных задач

|  |
| --- |
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|  |

ПК-5 готовностью к сбору и анализу жалоб пациента, данных его анамнеза, результатов осмотра, лабораторных, инструментальных, патолого-анатомических и иных исследований в целях распознавания состояния или установления факта наличия или отсутствия заболевания

ПК-9 готовностью к ведению и лечению пациентов с различными нозологическими формами в амбулаторных условиях и условиях дневного стационара

1. **Оценочные материалы текущего контроля успеваемости обучающихся.**

**Оценочные материалы по каждой теме дисциплины/** **Evaluation materials for each topic of the discipline**

**Модуль/** **Module 1 «Болезни младшего возраста/ Diseases in infants and toddlers»**

**Тема/** **Theme 1** **«Физическое и нервно-психическое развитие ребенка/The growth and development in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Что такое «рост»?

2. Какие факторы влияют на рост?

3. Периоды роста.

4. Каковы критерии / показатели для оценки роста: вес, длина / рост, вес для роста, скорость роста, соотношение тела, голова, отношение окружности головы к груди, окружность среднего плеча, толщина складки кожи?

5. Какая формула для расчета ИМТ? Оценка ИМТ у детей.

6. Прорезывание зубов: временное и постоянное прорезывание зубов. Количество зубов.

7. Костный возраст: определение, центры окостенения и сроки окостенения.

8. Оценка роста.

9. Особенности развития фаз подросткового возраста.

10. Рейтинг половой зрелости (SMR) Таннера:

• Оценки половой зрелости (2-5) изменений лобковых волос у подростков мужского и женского пола (Courtesy of J.M. Tanner, MD, Institute of Child Health, Department for Growth and Development, University of London, London, England).

• Рейтинги половой зрелости (1-5) изменений молочной железы у девочек-подростков (Courtesy of J.M. Tanner, MD, Institute of Child Health, Department for Growth and Development, University of London, London, England).

**Questions**

1. What is «growth»?
2. What factors affect the growth?
3. Periods of growth.
4. What are the criteria/indices for assessment of growth: weight, length/height, weight for height, growth velocity, body ratio, head, head/chest circumference ratio, midarm circumference, skin-fold thickness?
5. What is the formula for calculating BMI? Assessment of BMI in children.
6. Dentition: temporary and permanent teething. Number of teeth.
7. Bone-age: definition, ossification centers and timing ossification.
8. Assessment of growth.
9. Developmental characteristics of phases of adolescence.
10. Tanner’s sexual maturity rating (SMR):

* Sexual maturity ratings (2-5) of pubic hair changes in adolescent males and females (Courtesy of J.M. Tanner, MD, Institute of Child Health, Department for Growth and Development, University of London, London, England).
* Sexual maturity ratings (1-5) of breast changes in adolescent  females (Courtesy of J.M. Tanner, MD, Institute of Child Health, Department for Growth and Development, University of London, London, England).

**Задания для отработки практических умений/ Tasks for practicing practical skills**

1. Anthropometry of children depending on age

2. The formation of age groups of children

3. Assessment of real development by centile tables

4. Assessment of neuropsychic development according to the evaluation tables

5. Assessment of sexual development

**Tasks for** predominant milk-based (non–human milk) diets

* 1. hemolytic anemias

1. WHAT IS THE REGIMEN OF TREATMENT OF FOLIC ACID DEFICIENCY
2. 50 – 100 μg/day per os folic acid
3. 100 – 150 μg /day per os folic acid
4. 150 – 200 μg /day per os folic acid
5. 200 – 250 μg /day per os folic acid

**Типовые тестовые задания для проверки знаний/Typical test tasks for testing knowledge:**

1. A measure of physical maturation, signifies an increase in size of the body and its various organs is called
2. development
3. behavior
4. communication
5. growth

1. What genetic factor affects on growth and development?
2. hygiene
3. lysine deficiency
4. chromosomal disorders
5. congenital heart defects
6. Infancy is a period of life
7. first 4 weeks of life
8. first year of life
9. 1 to 3 years
10. 3 to 6 years
11. By what age infant doubles his birthweight?
12. by the age of 5 months
13. by the age of 6 months
14. by the age of 7 months
15. by the age of 8 months
16. At what age a child can stand (without support)?
17. 14 months
18. 13 months
19. 12 months
20. 11months

**Образец решения задачи/** **An example of solving the task**

1. Skin is pale color, there was swelling at the injection site after vaccination, drowsy bruising on the legs and hematoma of 3 cm, lethargic and drowsy.
2. CBC: RBC – decries, HGB - decries, ESR – increase, Prothrombin time: prolong, International normalized ratio: increase, Activated partial thromboplastin time: increase.
3. Hemorrhagic syndrome associated with Vitamin K deficiency
4. Intravenous vitamin K and fresh frozen plasma infusion
5. Preventive dose in newborn - Vitamin K 1,0 mg i.m. for term infants and 0,5 mg in preterms.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| d | c | b | a | c |

**Тема/** **Theme 2** **«Основные синдромы в педиатрии. Методика обследования ребенка/The main syndromes in pediatrics. Methods of examination of the child»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Основные синдромы при заболеваниях сердечно-сосудистой системы.

2. Основные синдромы при заболеваниях желудочно-кишечного тракта.

3. Основные синдромы при заболеваниях органов дыхания.

**Questions**

1. The main syndromes in diseases of the cardiovascular system.
2. The main syndromes in diseases of the gastrointestinal tract.
3. The main syndromes in diseases of the respiratory system.

**Задания для отработки практических умений/ Tasks for practicing practical skills**

1. Examination of the chest: inspection, palpation, percussion (comparative, topographic), auscultation lung and heart
2. Blood pressure measurement
3. Examination of the abdomen: inspection, percussion, palpation (light, deep, bimanual)
4. Percussion of the liver
5. Palpation of the radial pulse, jugular venous, femoral pulse

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. A deep groove extending outward from the xiphisternum - is called
   1. Harrison's sulcus
   2. kyphosis sulcus
   3. scoliosis sulcus
   4. Rachitis sulcus
   5. lordosis sulcus
2. The short inspiration and expiration occurs either when breathing is restricted or is painful as in chest wall disease and pleurisy, or in anxiety states - is called
   1. Kussmaul breathing
   2. Cheyne-Stokes breathing
   3. Hursed lip breathing
   4. shallow breathing
   5. normal breathing
3. The best location by palpation and listen of the mitral valve at the
   1. left fifth intercostal space in the midclavicular line
   2. second intercostal space, just right of the sternal border
   3. second intercostal space, just left of the sternal border
   4. basis of sternum xiphoid process
4. Which method is used to determine the size of the liver?
   1. light palpation
   2. percussion
   3. auscultation
   4. deep palpation
5. Resonant sound to strike the front of the chest is characteristic of
   1. normal chest
   2. emphysematic chest
   3. pulmonary collapse
   4. pulmonary infiltration
   5. pleural effusion

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 1 | 4 | 1 | 2 | 1 |

**Тема/** **Theme 3** **«Заболевания связанные с дефицитом витаминов у детей / Vitamins Deficiencies»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Дефицит и избыток витамина А: обзор витамина А, метаболизм витамина А, функции витамина А и механизмы действия.

2. Дефицит витамина А: клинические проявления дефицита витамина А, диагностика, эпидемиология и проблемы общественного здравоохранения, диетические эталонные дозы для здорового населения, витамин А для лечения дефицита.

3. Гипервитаминоз А.

4. Дефицит и избыток комплекса витамина В: дефицит тиамина (витамина В1): клинические проявления, диагностика, профилактика, лечение.

5. Дефицит рибофлавина (витамина В2): клинические проявления, диагностика, профилактика, лечение.

6. Дефицит ниацина (витамина В3): клинические проявления, диагностика, профилактика, лечение.

7. Дефицит витамина В6 (пиридоксина): клинические проявления, диагностика, профилактика, лечение.

8. Дефицит биотина.

9. Дефицит фолата: клинические проявления, диагностика, профилактика, лечение.

10. Витамин В 12 (кобаламин): клинические проявления, диагностика, профилактика, лечение.

11. Витамин С (аскорбиновая кислота): диетические потребности и источники.

12. Дефицит витамина С (аскорбиновой кислоты): клиника, лабораторные данные и диагностика, дифференциальная диагностика, лечение, профилактика.

13. Дефицит витамина Е: патогенез, клинические проявления, лабораторные данные, диагностика и дифференциальная диагностика, лечение, прогноз, профилактика.

14. Дефицит витамина К: патогенез, клинические проявления, лабораторные данные, диагностика и дифференциальная диагностика, лечение, прогноз, профилактика.

**Questions**

1. Vitamin A deficiencies and excess: overview of vitamin А, metabolism of vitamin A, functions of vitamin A and mechanisms of action.
2. Vitamin A deficiency: clinical manifestations of vitamin A deficiency, diagnosis, epidemiology and public health issues, dietary reference intakes for the healthy population, vitamin A for treatment of deficiency.
3. Hypervitaminosis A.
4. Vitamin B complex deficiencies and excess: Thiamine (Vitamin B1) deficiency: clinical manifestations, diagnosis, prevention, treatment.
5. Riboflavin (Vitamin B2) deficiency: clinical manifestations, diagnosis, prevention, treatment.
6. Niacin (Vitamin B3) deficiency: clinical manifestations, diagnosis, prevention, treatment.
7. Vitamin B6 (Pyridoxine) deficiency: clinical manifestations, diagnosis, prevention, treatment.
8. Biotin deficiency.
9. Folate deficiency: clinical manifestations, diagnosis, prevention, treatment.
10. Vitamin B 12 (Cobalamin): clinical manifestations, diagnosis, prevention, treatment.
11. Vitamin C (Ascorbic Acid): dietary needs and sources.
12. Vitamin C (Ascorbic Acid) deficiency: clinical features, laboratory findings and diagnosis, differential diagnosis, treatment, prevention.
13. Vitamin E deficiency: pathogenesis, clinical manifestations, laboratory findings, diagnosis and differential diagnosis, treatment, prognosis, prevention.
14. Vitamin K deficiency: pathogenesis, clinical manifestations, laboratory findings, diagnosis and differential diagnosis, treatment, prognosis, prevention.

**Задания для отработки практических умений/ Tasks for practicing practical skills**

1. Make a plan investigation for a child with Vitamin deficiency

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 6 month-old exclusively breastfed boy was admitted to hospital with brief head nods and symmetric limbs contractions over a period of 10 days.

He was born full term after a normal pregnancy. His birthweight was 2750 gr (25th percentile), length 47 cm (50th percentile) and head circumference was 35 cm (50th percentile).

On physical examination, the child had the following growth parameters; 7.5 kg (10-25th percentile), height 69 cm (25-50th percentile) and head circumference 43 cm (25-50th percentile). He was observed to have head nods and flexor limbs spasms which appear in clusters. Psychomotor development was normal: he was following moving things with eyes and responding to affection. He was achieved trunk control at age 5 months. There were no organomegaly and dysmorphic features.

Laboratory findings:

The serum vitamin B12 level was 99.76 pg/mL (reference range 191-663 pg/mL).

Serum folate level was 16.01 ng/mL (reference range 4.6-18.7 ng/mL).

**Questions:**

1. What are the symptoms of the disease?
2. Assess the laboratory findings.
3. What is the initial diagnosis?
4. Which additional investigation should be carried out to confirm diagnosis?
5. What is the tactic of treatment?
6. What is the prevention of the disease?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What meals are very rich in vitamin A?
2. liver, kidney
3. pumpkin, sweet potato
4. spinach, broccoli
5. oranges, apples

1. Glossitis, photophobia, lacrimation, corneal vascularization, poor growth, cheilosis are the effect of deficiency of
2. thiamine (vitamin B1)
3. riboflavin (vitamin B2)
4. niacin(vitamin B3)
5. pyridoxine (vitamin B6)
6. What laboratory investigations should be carry out for patient with bleeding as a result of vitamin K deficiency?
7. serum lipid levels
8. plasma ascorbate concentration
9. plasma retinol
10. protrombin time
11. The cause of vitamin C deficiency is
12. vegan diets
13. consumption of raw eggs for prolonged periods
14. predominant milk-based (non–human milk) diets
15. hemolytic anemias
16. What is the regimen of treatment of folic acid deficiency?
17. 0,5 – 1 mg/day per os folic acid
18. 1 – 1,5 mg/day per os folic acid
19. 1,5 – 2 mg/day per os folic acid
20. 2 – 2,5 mg/day per os folic acid

**Образец решения задачи/** **An example of solving the task**

1. The serum vitamin B12 level is low. Serum folate level is normal.
2. Infantile spasms associated with vitamin B12 deficiency.
3. CBC: Hemoglobin level, leukocyte and platelet counts, mean corpuscular volume, red blood cell count, hematocrit. Iron and ferritin levels, biochemical profile, blood and urine amino acid levels. Blood smear.
4. Cranial magnetic resonance, electroencephalography (hypsarrhythmia)
5. Parenteral administration of 250-1,000 µg vitamin B12 - daily or alternate days in ﬁrst week followed by weekly for the ﬁrst 1-2 mo, and then monthly thereaﬅer.

The patient received intramuscular synthetic adrenocorticotropic hormone (ACTH) treatment 25 IU twice a week, total of 12 doses and intramuscular vitamin B12 treatment 100 mcg daily for a week, then given 100 mcgevery other day for a week, and then given 100 mcg twice a week. After this regimen, he was given 100 mcg monthly for 3 months. His symptoms resolved after ACTH and vitamin B12 treatment.

1. 0.5 µg/day at age 6-12 mo, vitamin B12 for prevention.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| a | b | d | c | a |

**Тема/** **Theme 1** **«Вскармливание детей первого года жизни/ Feeding Healthy Infants»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Кормление в течение первого года жизни: грудное вскармливание.

2. Выделены полезные свойства грудного молока по сравнению с детской смесью.

3. Условия, при которых предполагается, что грудное молоко может оказывать защитное действие.

4. Абсолютные и относительные противопоказания к кормлению грудью из-за состояния здоровья матери.

5. Рекомендации по ведению грудного вскармливания для здоровых доношенных детей.

6. Формула кормления: составы на основе белков коровьего молока, соевые составы, состав гидролизата белка, составы аминокислот.

7. Боль в сосках, заложенность, мастит, недостаточное потребление молока. Сбор грудного молока.

8. Алгоритм подачи для доношенных детей.

9. Дополнительное питание.

10. Навыки кормления с рождения до 36 месяцев.

**Questions**

1. Feeding during the first year of life: breastfeeding.
2. Selected beneficial properties of human milk compared to infant formula.
3. Conditions for which human milk has been suggested to possibly have a protective effect.
4. Absolute and relative contraindications to breastfeeding because of maternal health conditions.
5. Recommendations on breastfeeding management for healthy term infants.
6. Formula feeding: cow milk protein–based formulas, soy formulas, protein hydrolysate formula, amino acid formulas.
7. Nipple pain, engorgement, mastitis, inadequate milk intake. Collecting breast milk.
8. Feeding algorithm for term infants.
9. Complementary feeding.
10. Feeding skills birth to 36 months.

**Задания для отработки практических умений/ Tasks for practicing practical skills**

1. Make nutritional recommendations and a feeding schedule for a 6 month old baby

**Образец решения задачи/** **An example of solving the task**

6 months

Weight (birth) - 3000

Weight (expected) = 3000 + 4300 (600 + 800 + 800 + 750 + 700 + 650) = 7300

V (daily) = W (e) x1 / 8 = 7300/8 = 912

V (single) = V (s) / 5 = 912/5 = 182

600 - breast milk - 182ml

1000 - porridge (150ml) + butter (4ml) + fruit puree (28ml)

1400 - vegetable puree (147 ml) + vegetable oil (5 ml) + meat puree (30)

1800 - breast milk - 182ml

2200 - breast milk - 182ml

Vit D - 1000ME

Cookies for children (3g), fruit puree (60 ml)

Protein - 2.6g

Fats - 6.0g

Carbohydrates - 13 g

Calories - 115kcal

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What is factor can prevent bacterial attachment like a beneficial properties of human milk compared to infant formula?
2. cytokines
3. secretory IgA
4. oligosaccharides
5. nucleotides
6. What is the regimen of breastfeeding in neonates?
7. 6-8 times a day with a minimum of 6 times per
8. 8-12 times a day with a minimum of 8 times per day
9. 12-16 times a day with a minimum of 12 times per day
10. 16-18 times a day with a minimum of 16 times per day
11. Contraindications to breastfeeding because of maternal health conditions is
12. hepatitis C infection
13. Varicella-zoster infection
14. cigarette smoking
15. Tuberculosis infection
16. Extensively hydrolyzed formulas contain peptides with a molecular weight of
17. <3000 Da
18. <4000 Da
19. <5000 Da
20. <6000 Da
21. WHO recommend exclusive breastfeeding for the first
22. 12 months
23. 10 months
24. 8 months
25. 6 months

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| c | b | d | a | d |

**Тема/** **Theme 1** **«Белково-энергетическая недостаточность питания у детей /Protein-energy Malnutrition in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Недоедание: этиология, классификация белково-энергетического недоедания.

2. Недоедание: определение, измерение недоедания, последствия недоедания.

3. Клинические проявления и лечение недоедания.

4. Особенности клинических синдромов: квашиоркор: клинические особенности, биохимические изменения, диагностика: существенные признаки (минимальные диагностические критерии), несущественные признаки.

5. Особенности клинических синдромов: питательный маразм: клинические особенности, биохимические изменения, диагностика: существенные признаки, несущественные признаки.

6. Осложнения ПЭМ.

7. Нарушения мальабсорбции: этиология, классификация.

8. Глютеновая болезнь: этиопатогенез, клиника, диагностика, лечение.

9. Углеводная мальабсорбция: определение, клинические проявления, диагностика, лечение.

**Questions**

1. Malnutrition: etiology, classification Protein-energy malnutrition.
2. Undernutrition: definition, Measurement of Undernutrition, Consequences of Undernutrition.
3. Clinical Manifestations and Treatment of Undernutrition.
4. Special features of clinical syndromes: kwashiorkor: clinical features, biochemical changes, diagnosis: essential features (minimal diagnostic criteria), nonessential features.
5. Special features of clinical syndromes: nutritional marasmus: clinical features, biochemical changes, diagnosis: essential feature, nonessential features.
6. Complications of PEM.
7. Disorders of Malabsorption: etiology, classification.
8. Celiac disease: etiopathogenesis, clinical features, diagnosis, treatment.
9. Carbohydrate malabsorption: definition, clinical manifestation, diagnosis, treatment.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with malnutrition

**Типовые практические задания для проверки умений/ Typical practical tasks for testing skills:**

Infant at the age of 2 months was born from the first pregnancy, healthy mother 18 years old, which in the first trimester of pregnancy suffered acute respiratory disease.

The girl was born at 40 weeks of gestation, vaginal delivery. Delivery occurred without complication. Birth weight 3000 g body length - 51 cm, Apgar score 8/9 points.

On breastfed, on demand, sucks greedily, feeding rate 20 times/day. Body weight in 1 month - 3500 g, 2 months - 4000 g, subcutaneous fat layer is thinned on the abdomen, slightly decreased tissue turgor. Other abnormalities on examination were not marked. Stool was rare. In previous 2 months, the baby was not been sick. Psychological development is according to the calendar age.

**Questions:**

1. Does the weight of the child is according to the child calendar age?
2. Which disease can be diagnosed?
3. Which reasons can cause disease?
4. What should be the tactic of management?
5. Does this child need hospitalization?
6. What amount needed food every day?

**Образец решения задачи/ An example of solving the task**

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Etiology of primary malnutrition
2. dietary deficiency
3. malabsorption
4. malaria
5. tuberculosis
6. According WHO Classification of PEM severe PEM is characterized by
7. < 70% of expected of height for age
8. 70-79% of expected of height for age
9. < 85% of expected of height for age
10. 85-89% of expected of height for age
11. Essential feature of Kwashiorkor includes
12. hair changes
13. growth retardation
14. diarrhea
15. vomiting
16. Nonessential feature of nutritional marasmus includes
17. absence of edema
18. gross muscle as well as subcutaneous fat wasting
19. growth retardation
20. superadded infections and infestations
21. Celiac disease is triggered by the ingestion of
22. rice
23. wheat
24. buckwheat
25. corn

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| a | c | b | d | b |

**Тема/ Theme 6 «Рахит, гипервитаминоз витамина Д у детей/Rickets. Hypervitaminosis D in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Витамин D физиология.

2. Этиология рахита.

3. Клинические проявления рахита.

4. Исследования: рентгенология и лабораторные исследования.

5. Клиническая оценка детей с рахитом.

6. Лечение дефицита витамина D рахитом.

7. Профилактика рахита дефицита витамина D.

8. Гипервитаминоз Д: этиология, патогенез, клинические проявления, лабораторные данные, диагностика и дифференциальная диагностика, лечение, прогноз.

**Questions**

1. Vitamin D physiology.
2. Etiology of rickets.
3. Clinical manifestations of rickets.
4. Investigations: radiology and laboratory findings.
5. Clinical evaluation of children with rickets.
6. Treatment of vitamin D deficiency rickets.
7. Prevention of vitamin D deficiency rickets.
8. Hypervitaminosis D: etiology, pathogenesis, clinical manifestations, laboratory findings, diagnosis and differential diagnosis, treatment, prognosis.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with Rickets

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

Child is 5 months old. From history we know that the child was born in August. Birth weight 3600 g, length 53 cm, cried directly. Breastfeeding up to 2 months, then with cow's milk. In the past 2 months mother noticed that the child was restless, flinched in his sleep, sweated profusely, from nappies strong smell of ammonia.

**On examination:** weight – 7200 g, length 69 cm, baby could not turn around his body, he can hold his head. Flattening and alopecia of the occipital was noticed. Fontanel 3x3 cm, the edges was malleable. The lower thoracic was deployed, Harrison's groove visible, palpable rib. Muscular hypotonia, poorly supported on legs. The abdomen is swollen, spread-eagled. Liver is 2.5 cm, spleen +0.5 cm below the costal margin and the splenic tip was palpable. Stool porridge-like, 2 - 3 times daily.

**Questions:**

1. What are the symptoms of the disease?
2. What is the initial diagnosis?
3. What additional investigation should be carried out to confirm diagnosis?
4. What is the tactic of treatment?
5. What is the prevention of the disease?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What foods contain vitamin d2 in a large quantity
   1. strawberry
   2. potatoes
   3. apples
   4. plants
2. Scoliosis is the disorder of what part of the body
   1. back
   2. chest
   3. extremities
   4. head
3. The edge of the metaphysis loses its sharp border, which is described as
   1. rachitic rosary
   2. fraying
   3. cupping
   4. trabeculation of the diaphysis
4. The initial laboratory tests in a child with rickets should include
   1. cholesterol
   2. ascorbic acid
   3. phosphorus
   4. iron
5. What is the stoss therapy in treatment of rickets
   1. 300,000-600,000 IU of vitamin D are administered orally or intramuscularly as 2-4 doses over 1 day
   2. 300,000-600,000 IU of vitamin D are administered orally or intramuscularly as 1-2 doses over 1 day
   3. 300,000-600,000 IU of vitamin D are administered orally or intramuscularly as 2-4 doses over 2 days
   4. 600,000-900,000 IU of vitamin D are administered orally or intramuscularly as 2-4 doses over 1 day

**Образец решения задачи/** **An example of solving the task**

1. An increase in the large fontanel, the edges was malleable, lower thoracic was deployed, Harrison's groove visible, palpable rib, muscular hypotonia, poorly supported on legs, abdomen is swollen, spread-eagled.
2. Rickets, acute stage.
3. Calcium, phosphorus, 1,25-D levels
4. Vitamin D, from 2,000-5,000 IU/day over 4-6 weeks, oral calcium supplements, 20 mg/kg of calcium сchloride or 100 mg/kg of calcium gluconate can be tapered over 2-6 wk in children who receive adequate dietary calcium.
5. 400 IU of vitamin D to infants who are breastfed, older children should receive 600 IU/day. Vitamin D may be administered as a component of a multivitamin or as a vitamin D supplement

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 4 | 1 | 2 | 3 | 1 |

**Тема/ Theme 7 «Наследственные заболевания у детей/Inherited diseases in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Синдром Дауна: клинические проявления, диагностика,

2.Фенилкетонурия: клинические проявления, диагностика, скрининг новорожденных, лечение.

3. Галактоземия: клинические проявления, диагностика, генетика, лечение и прогноз.

4. Муковисцидоз: генетика, патогенез, патология, клинические проявления, диагностика и оценка, лечение, прогноз.

**Questions**

1. Down syndrome: clinical manifestations, diagnosis,
2. Phenylketonuria: clinical manifestations, diagnosis, neonatal screening, treatment.
3. Galactosemia: clinical manifestations, diagnosis, genetics, treatment and prognosis.
4. Cystic fibrosis: genetics, pathogenesis, pathology, clinical manifestations, diagnosis and assessment, treatment, prognosis.

**Задания для отработки практических умений/ Tasks for practicing practical skills**

1. Make a plan investigation for a child with Cystic fibrosis

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 4-month-old male infant was the second child of an unrelated couple. The mother was 22 years of age and the father was 33 years old at the time of the child’s birth. The child was born following a normal gestation and delivery. The couple also has a healthy 1.5-year-old son.

**The physical examination** showed open fontanel, microcephaly, epicanthic folds, low set and malformed ears, open mouth, high-arched palate, hypertelorism, muscular hypotonia, short broad hand, short fingers, clinodactyly, gap between 1st and 2nd toes and plantar furrow.

**Vital signs:** T -35.7 ºC, HR -90 beats per min, RR -32 breaths per min. In lungs vesicular breathing, no wheezing, heart sounds loud rhythmic. Abdomen: liver size normal, painless during palpation. Stool is dark brown, soft, 1 time in 2 days. Urinating is normal.

**Questions:**

1. What are clinical signs of disease?
2. What is your initial diagnosis?
3. Which additional investigation should be carried out?
4. What is included in the neonatal screening test for the diagnosis of Down syndrome?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Down syndrome is
   1. Trisomy 21
   2. Trisomy 18
   3. Trisomy 13
   4. Trisomy 8
2. In what age can children with down syndrome be sitting
   1. 1-5 months
   2. 5-9 months
   3. 6-18 months
   4. 18-24 months
3. In classic phenylketonuria the plasma concentration of phenylalanine is
   1. >20 mgdL
   2. 10-20mgdL
   3. 2-10 mgdL
   4. 1-2 mgdL
4. The most constant symptom of pulmonary involvement in cystic fibrosis is
   1. dysplasia
   2. chest pain
   3. sneezing
   4. cough
5. Glucocorticoid deficiency, mineralocorticoid deficiency (salt-wastingcrisis), ambiguous genitalia in females, postnatal virilization in males and females are the symptoms of
   1. 3β-Hydroxysteroid dehydrogenase deficiency, classic form
   2. 21-Hydroxylase deficiency, classic form
   3. 21-Hydroxylase deficiency, nonclassic form
   4. 11β-Hydroxylase deficiency

**Образец решения задачи/** **An example of solving the task**

1. Open fontanel, microcephaly, epicanthic folds, low set and malformed ears, open mouth, high-arched palate, hypertelorism, muscular hypotonia, short broad hand, short fingers, clinodactyly, gap between 1st and 2nd toes and plantar furrow; bradicardia, constipation.
2. Dawn Syndrome
3. Karyotype
4. Ultrasound, Blood tests: α-fetoprotein, Karyotype

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 1 | 3 | 1 | 4 | 2 |

**Модуль/** **Module 2 «Болезни крови и сосудов у детей/Blood and vascular diseases in children»**

**Тема/ Theme 8 «Железо-дефицитная анемия у детей/Iron-deficiency anemia in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Анемия: определение, классификация, этиология, анамнез и физикальное обследование.

2. Мегалобластная анемия: определение, этиология.

3. Дефицит фолиевой кислоты: этиология, клинические проявления, лабораторные данные, лечение.

4. Витамин В12 (кобаламин) Дефицитная анемия: метаболизм кобаламина, этиология, клинические проявления, лабораторные данные, диагностика, лечение.

5. Железодефицитная анемия: этиология, клинические проявления, лабораторные данные, профилактика, лечение.

6. Гемолитическая анемия: определение, классификация,

7. Наследственный сфероцитоз: этиология, диагностика, лечение.

**Questions**

1. Anemia: definition, classification, etiology, history and physical examination.
2. Megaloblastic anemia: definition, etiology.
3. Folic Acid Deficiency anemia: etiology, clinical manifestations, laboratory findings, treatment.
4. Vitamin B12 (Cobalamin) Deficiency anemia: Cobalamin metabolism, etiology, clinical manifestation, laboratory findings, diagnosis, treatment.
5. Iron-Deficiency anemia: etiology, clinical manifestation, laboratory findings, prevention, treatment.
6. Hemolytic Anemia: definition, classification,
7. Hereditary spherocytosis: etiology, diagnosis, treatment.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with anemia

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A girl of 11 years old with complains of weakness, irritability, anorexia, abdominal pain.

**Vital signs:** T-36.6ºC, RR-24 breaths per minute, HR-100 beats per minute, BP-90/60 mmHg. Skin is pale. Her oral mucosa is moist. The tongue is smooth, red, and painful. In lungs vesicular breathing, no wheezing, heart sounds loud rhythmic. An abdomen is soft, painless at palpation. Neurologic manifestations include ataxia, paresthesias, hyporeflexia.

**CBC:** Hb-89 g/L, RBC-3,3x1012/L, WBC -11х109/L, HCT-26%, PLT - 650 x109/L, ESR - 15 mm/hour. The laboratory tests reports that the macrocytic, with prominent macroovalocytosis of the RBCs are detected.

Serum vitamin B12 levels are <100 pg/mL.

Concentrations of serum iron and serum folic acid are normal.

**Questions:**

1. What are the symptoms of the disease?
2. Assess the results of laboratory investigations.
3. What is the initial diagnosis?
4. What is the tactic of treatment?
5. What is the prevention of the disease?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. At what age anemia usually occurs in term infants
   1. 0-9 months
   2. 9-24 months
   3. 24-36 months
   4. 36-48 months
2. At what age the iron-deficiency anemia can identify by recommended laboratory screening
   1. 9 months
   2. 10 months
   3. 11months
   4. 12 months
3. What changes in complete blood analysis can occur in iron-deficiency anemia
   1. hemoglobin increased, red blood cell count increased, red cell distribution width increased
   2. hemoglobin increased, red blood cell count decreased, red cell distribution width increased
   3. hemoglobin decreased, red blood cell count decreased, red cell distribution width increased
   4. hemoglobin decreased, red blood cell count decreased, red cell distribution width decreased
4. In what situation parenteral iron preparations are used for the treatment of iron-deficiency anemia
   1. congenital heart defects
   2. pneumonia
   3. constipation
   4. malabsorption
5. At what age routine screening using hemoglobin or hematocrit is done
   1. at 12 months of age
   2. at 6 months of age
   3. at 3 months of age
   4. at 1 month of age

**Образец решения задачи/** **An example of solving the task**

1. Skin is pale, tongue is smooth, red, and painful
2. CBC: RBC – decries, HGB - decries, ESR – increase, macrocytic, with prominent macroovalocytosis of the RBCs are detected, vitamin B12 levels is decries, serum iron and serum folic acid are normal.
3. B12 deficiency anemia
4. 1,000µg IM Vitamin B12 (The hematologic symptoms respond promptly to parenteral administration of 250-1,000 µg vitamin B12. Children with severe deficiency and those with neurologic symptoms need repeated doses; daily or alternate days in first week followed by weekly for the first 1-2 mo, and then monthly thereafter. Children having only hematologic presentation recover fully within 2-3 mo, whereas those with neurologic disease need at least 6 mo of therapy.)
5. 9-13 years:Vitamin B12 - 1.8 µg/day

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 2 | 4 | 3 | 4 | 1 |

**Тема/ Theme 9 «Лейкемия у детей/Leukemia in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Лейкемия: определение.

2. Острый лимфобластный лейкоз: эпидемиология, этиология, клеточная классификация, клинические проявления и диагностика, лечение, поддерживающая терапия, профилактика, осложнения, прогноз.

3. Лимфома: определение.

4. Лимфома Ходжкина: эпидемиология, патогенез, диагностика клинических проявлений, лечение, рецидив, прогноз.

5. Неходжкинская лимфома: эпидемиология, патогенез, клинические проявления, лабораторные данные, лечение, осложнения, прогноз.

**Questions**

1. Leukemia: definition.
2. Acute Lymphoblastic Leukemia: epidemiology, etiology, cellular classification, clinical manifestations and diagnosis, treatment, supportive care, prevention, complications, prognosis.
3. Lymphoma: definition.
4. Hodgkin Lymphoma: epidemiology, pathogenesis, clinical manifestations diagnosis, treatment, relapse, prognosis.
5. Non-Hodgkin Lymphoma: epidemiology, pathogenesis, clinical manifestations laboratory findings, treatment, complications, prognosis.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with Leukemia

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 5-year-old boy with complaints of sweating, weakness, weight loss. Patient is ill during 3 months.

**On examination:** T - 37.1ºC, HR – 104 beats per minute, RR – 24 breaths per minute. Skin pale and bruising on the legs. Enlargement of jugular and axillary lymphatic nodes is revealed, size - 6,0х7,0 sm., consistence – softly-elastic, a liver comes forward from under a costal arc on 5 sm., spleen - on 8 sm., at palpation – sensible. The area of the heart is not changed. Heart sounds are loud, rhythmic, noise is not heard. In the lungs, vesicular breathing, wheezing is not heard. Neuro developmental assessment is appropriate for age. Stool is dark brown, soft.

**Investigation:**

CBC: HGB-92 g/L, RBC-2.8x1012/L, WBC-4x109/L, PLT-90,0x109/L, ESR-20 mm/h, NEUT-9%, MONO -2%, LYMPH-69%, blasts sells-20%.

**Questions:**

1. What are the symptoms of the disease?
2. Assess the results of laboratory investigations.
3. What is the initial diagnosis?
4. What additional investigation should be carried out to confirm diagnosis?
5. What is the tactic of treatment?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Leukemia is mainly seen in children at what age
2. 0<1 years
3. 2< 4 years
4. 4<14 years
5. >14 years
6. What laboratory test is important in the diagnosis of acute leukemia
7. leucopenia
8. leucocytosis
9. blastemia
10. anemia
11. What amount of blast cells in puncture material of bone marrow is acceptable in the period of clinico-hematological remission
12. 4%
13. 5%
14. 8%
15. 10%
16. At what disease blast cells and hiatus leucemicus are revealed in a full blood count
17. Hodgkin Lymphoma
18. non-Hodgkin Lymphoma
19. acute Lymphoblastic Leukemia
20. acute Myelogenous Leukemia
21. Remission is:
22. <95% blasts in the marrow and a return of neutrophil and platelet counts to near-normal levels after 4-5 wk of treatment
23. <45% blasts in the marrow and a return of neutrophil and platelet counts to near-normal levels after 4-5 wk of treatment
24. <5% blasts in the marrow and a return of neutrophil and platelet counts to near-normal levels after 2 wk of treatment
25. <5% blasts in the marrow and a return of neutrophil and platelet counts to near-normal levels after 4-5 wk of treatment

**Образец решения задачи/** **An example of solving the task**

1. Sweating, weakness, weight loss, skin pale and bruising on the legs, enlargement of jugular and axillary lymphatic nodes, hepatomegaly, splenomegaly.
2. CBC: RBC, WBC, HGB, PLT are decries, ESR – increase, appeared blasts sells.
3. Acute leukemia
4. Acute leukemia is diagnosed by a bone marrow evaluation that demonstrates >25% of the bone marrow cells as a homogeneous population of lymphoblasts. Initial evaluation also includes CSF examination.
5. Use of multiagent chemotherapeutic regimens, intensification of therapy, and selection of treatment based upon relapse risk

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 2 | 3 | 1 | 3 | 4 |

**Модуль/** **Module 3 «Болезни крови и сосудов у детей/Blood and vascular diseases in children»**

**Тема/ Theme 10 «Васкулиты у детей/Vasculitis syndromes in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Вакуумные синдромы: определение, классификация.

2. Генох-Шенлейн пурпура: эпидемиология, этиология, патология, патогенез, клинические проявления, лабораторные данные, лечение, осложнения, прогноз.

3. Болезнь Кавасаки: эпидемиология, этиология, патология, патогенез, клинические проявления, лабораторные и рентгенологические данные, диагностика, лечение, осложнения, прогноз.

4. Такая артериит: эпидемиология, этиология, патология, клинические проявления, диагностика, лабораторные данные, лечение, осложнения, прогноз.

**Questions**

1. Vacuities syndromes: definition, classification.
2. Henoch-Schönlein purpura: epidemiology, etiology, pathology, pathogenesis, clinical manifestations, laboratory findings, treatment, complications, prognosis.
3. Kawasaki disease: epidemiology, etiology, pathology, pathogenesis, clinical manifestations, laboratory and radiology findings, diagnosis, treatment, complications, prognosis.
4. Takayasu arteritis: epidemiology, etiology, pathology, clinical manifestations, diagnosis, laboratory findings, treatment, complications, prognosis.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with Henoch-Schönlein purpura

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

5-year-old boy went to the emergency department with complaints of acute arthritis right ankle. His ankle was red, hot and obviously swollen. His mother says that he refuses to bear weight on this leg. In addition, she notes that he complained of pain in his left knee the previous day, and had an upper respiratory infection the 2 weeks before. The history of the disease and the history of the family - is not burdened.

**On examination:** T-38.0ºC, HR-120 beats per min, RR-24 breaths per min, BP-130/90mmHg. He looks sick, feverish and irritable. He has swelling, erythema, pain, and movement to-limit-of-motion of the right ankle. His skin is pale with Petechial slightly raised rash on the legs, the most visible on his ankles, back of the thighs and buttocks. The exam is a positive for mild sore throat. Auscultation: vesicular breathing, no wheezing, heart sounds loud rhythmic. His abdomen is flat, soft, non-tender, without hepatosplenomegaly. Stool is dark brown, soft, negative for occult blood.

**Investigation**

**CBC**: WBC - 15х109, Hb - 82 g/L, HCT-26%, PLT - 750 x109/L, ESR - 50 mm/hour.

**Immunological analysis of blood:** RF negative, ASO - 750 Odd units, IgG - 1280 mg/dL, IgM - 280 mg/dL, IgA - 600 mg/dL, IgE -40 mg/dL.

**Urine analysis**: cloudy, amber; specific gravity - 1019, RBC – 3-4 of visual field, WBC – 0-1 of visual field, protein - 2+.

**Blood and urine cultures** were negative.

**Questions:**

1. What are the symptoms of the disease?
2. Assess the results of laboratory investigations.
3. What is the initial diagnosis?
4. What is the tactic of treatment?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What is henoch-schonlein purpura
   1. the most common vasculitis of childhood and is characterized by leukocytoclastic vasculitis and immunoglobulin (ig) a deposition in the small vessels in the skin, joints, gastrointestinal tract, and kidney.
   2. the chronic vasculitis of unknown etiology that predominantly involves the aorta and its major branches.
   3. the systemic necrotizing vasculitis affecting small and medium-size arteries, aneurysms and stenoses form at irregular intervals throughout affected arteries.
2. What is takayasu arteritis
   1. the most common vasculitis of childhood and is characterized by leukocytoclastic vasculitis and immunoglobulin a deposition in the small vessels in the skin, joints, gastrointestinal tract, and kidney.
   2. the chronic vasculitis of unknown etiology that predominantly involves the aorta and its major branches.
   3. the systemic necrotizing vasculitis affecting small and medium-size arteries, aneurysms and stenoses form at irregular intervals throughout affected arteries.
3. What is the most common symptom of kawasaki disease
   1. abdominal pain
   2. joint pain
   3. decreased urine output
   4. lymphadenopathy
4. Which immunoglobulin is prominently involved with the disease
   1. IgG
   2. IgM
   3. IgA
   4. Ig E
5. What sign does henoch-schönlein purpura include
   1. purpura
   2. subfebrility
   3. tonsillitis
   4. tachycardia

**Образец решения задачи/** **An example of solving the task**

1. He looks sick, feverish and irritable. He swelling, erythema, pain, and movement to-limit-of-motion of the right ankle.Petechial slightly raised rash on the legs, the most visible on his ankles, back of the thighs and buttocks.
2. CBC: RBC, HGB are decries, WBC, ESR, ASO – increase. Urine analysis: RBC, protein – appear.
3. Henoch-Schönlein purpura: skin-joint forms, mild degree.
4. Treatment for mild HSP is supportive, with an emphasis on assuring adequate hydration, nutrition, and analgesia. Steroids are most often used to treat significant gastrointestinal involvement or other life-threatening manifestations. Prednisone (1 mg/kg/day for 1-2 wk, followed by taper) reduces abdominal and joint pain but does not alter overall prognosis nor prevent renal disease. Rapid tapering of corticosteroids may lead to a flare of HSP symptoms. Although few data are available to demonstrate efficacy, intravenous immune globulin and plasma exchange are sometimes used in the setting of severe disease. In some cases, chronic HSP renal disease is managed with a variety of immunosuppressants, including azathioprine, cyclophosphamide, cyclosporine, and mycophenolate mofetil.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 1 | 2 | 4 | 3 | 1 |

**Тема/ Theme 11 «Геморрагические диатезы у детей/Hemorrhagic diathesis in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Гемофилия: определение, патофизиология, генетика и классификация.

2. Гемофилия: клинические проявления, лабораторные данные и дифференциальный диагноз.

3. Гемофилия: лечение, поддерживающая терапия, профилактика, хронические осложнения, комплексная помощь.

4. Что такое болезнь Виллебранда: этиология, эпидемиология, патогенез.

5. Болезнь фон Виллебранда: клинические проявления и лабораторная диагностика, лечение.

6. Идиопатическая (аутоиммунная) тромбоцитопеническая пурпура: эпидемиология, патогенез.

7. Идиопатическая тромбоцитопеническая пурпура: клинические проявления, исход, лабораторные данные, диагностика, дифференциальная диагностика, лечение.

**Questions**

1. Hemophilia: definition, pathophysiology, genetic and classification.
2. Hemophilia: clinical manifestations, laboratory findings and differential diagnosis.
3. Hemophilia: treatment, supportive care, prevention, chronic complications, comprehensive care.
4. What is von Willebrand disease: etiology, epidemiology, pathogenesis.
5. Von Willebrand disease: clinical manifestations and laboratory diagnosis, treatment.
6. Idiopathic (autoimmune) thrombocytopenic purpura: epidemiology, pathogenesis.
7. Idiopathic thrombocytopenic purpura: clinical manifestations, outcome, laboratory findings, diagnosis, differential diagnosis, treatment.

**Задания для отработки практических умений**

**Tasks for practicing practical skills**

1. Make a plan investigation for a child with hemorrhagic and thrombotic diseases

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 7-year-old boy went to the emergency department with from a wound which appeared after extraction of tooth, the strong bleeding began. His mother says that boy with a significant injury has extensive bruising and prolonged bleeding. The history of the family - his brother has severe hemophilia.

**On examination:** T -36.0 ºC, HR-90 beats per min, RR-24 breaths per min, BP-110 / 70mmHg. He looks sick. His skin is pale. The tooth is bleeding. Auskaltativno vesicular breathing, no wheezing, heart sounds loud rhythmic. Her abdomen is flat, soft, non-tender, without hepatosplenomegaly. Stool is dark brown, soft, negative for occult blood.

**Questions:**

1. What are the symptoms of the disease?
2. Assess the family history.
3. What is the initial diagnosis?
4. What additional investigation should be carried out to confirm diagnosis?
5. What is the tactic of treatment?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What from the listed changes of laboratory indices are the most characteristic for idiopathic thrombocytopenic purpura
2. reduced platelet size
3. normal count of red blood cells
4. normal of the platelets count
5. lowering of the platelets count
6. What is the main component of the hemostasis process
   1. the platelets
   2. the red blood cells
   3. the intact vascular endothelium
   4. the leukocytes
7. The reason of development of hemophilia b is:
8. infectious and inflammatory diseases
9. congenital vascular disorders
10. deficiency of the viii clotting factor
11. deficiency of the ix clotting factor
12. What from the listed drugs are the basic in a conservative therapy of idiopathic thrombocytopenic purpura
    1. corticosteroids
    2. recombinant factor ix (fix)
    3. blood transfusion
    4. antibiotics
13. What is an adequate level of factor viii for the treatment of life-threatening bleeding
    1. the level equal to that of normal plasma (100 iu/dl, or 100%)
    2. the level equal to that of normal plasma (10 iu/dl, or 10%)
    3. the level equal to that of normal plasma (500 iu/dl, or 500%)
    4. the level equal to that of normal plasma (50 iu/dl, or 50%)

**Образец решения задачи/** **An example of solving the task**

1. He has pale skin, bleeding tooth**.**
2. His brother has severe hemophilia.
3. Hemophilia
4. Factor VIII or factor IX is PTT
5. When mild to moderate bleeding occurs, values of factor VIII or factor IX must be raised to hemostatic levels, in the 35-50% range.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 4 | 1 | 4 | 1 | 1 |

**Тема/ Theme 12 «Острая ревматическая лихорадка у детей, кардиты у детей/Rheumatic Fever, Сarditis in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Ревматизм: этиология, эпидемиология, патогенез.

2. Ревматизм: клинические проявления и диагностика: основные и второстепенные критерии.

3. Ревматизм: лечение, профилактика, осложнения, прогноз.

4. Ревматическая болезнь сердца: клинические проявления патологии клапанов, лечение, профилактика.

5. Инфекционный эндокардит: этиология, эпидемиология, патогенез.

6. Инфекционный эндокардит: клинические проявления и диагностика.

7. Инфекционный эндокардит: лечение, профилактика, осложнения, прогноз.

8. Миокардит: этиология, эпидемиология, патогенез.

9. Миокардит: клинические проявления и диагностика.

10. Миокардит: лечение, профилактика, осложнения, прогноз.

11. Острый перикардит: этиология, эпидемиология, патогенез.

12. Острый перикардит: клинические проявления и диагностика.

13. Острый перикардит: лечение, профилактика, осложнения, прогноз.

**Questions**

1. Rheumatic fever: etiology, epidemiology, pathogenesis.
2. Rheumatic fever: clinical manifestations and diagnosis: major and minor criteria.
3. Rheumatic fever: treatment, prevention, complications, prognosis.
4. Rheumatic heart disease: clinical manifestation of patterns of valvular disease, treatment, prevention.
5. Infective Endocarditis: etiology, epidemiology, pathogenesis.
6. Infective Endocarditis: clinical manifestations and diagnosis.
7. Infective Endocarditis: treatment, prevention, complications, prognosis.
8. Myocarditis: etiology, epidemiology, pathogenesis.
9. Myocarditis: clinical manifestations and diagnosis.
10. Myocarditis: treatment, prevention, complications, prognosis.
11. Acute pericarditis: etiology, epidemiology, pathogenesis.
12. Acute pericarditis: clinical manifestations and diagnosis.
13. Acute pericarditis: treatment, prevention, complications, prognosis.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with inflammation cardiac diseases in children

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A child, 1 year-old boy admitted to the emergency department with complaints of low-grade fever, recently increased dyspnea, rash. At the age of 5 months there were frequent and severe anoxic spells. At the age of 9 months surgery was performed congenital heart disease: tetralogy of Fallot.

**On examination:** the temperature of 37.4 °C. Skin and mucous membranes pale, rare petechial rash on the extremities. In the lungs: breathing weakened, no wheezing. Heart sounds loud systolic murmur in the III-IV intercostal space on the left size. Heart rate 160 beats per minute, RR - 52 breaths per min. Liver +5 cm, spleen + 2.5 cm. Edema is absent.

**Investigation:**

**CBC:** Hb-142 g/L, RBC-5.5x1012/L, WBC-35х109/L, PLT-350 x109/L, NEUT-67.9%, EO-1%, LYMPH-25%, MONO-6%, BASO-0.1, ESR - 40 mm/hour.

**Questions:**

1. What are the symptoms of the disease?
2. Assess the results of laboratory investigations.
3. What is the initial diagnosis?
4. What additional investigation should be carried out to confirm diagnosis?
5. What is the tactic of treatment?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What is the main difference between rheumatic heart disease and acute rheumatic fever
   1. in acute rheumatic fever there is an elevated ESR
   2. in rheumatic heart disease there is a prolonged P-R interval
   3. in acute rheumatic fever there is a history of arthralgias
   4. in rheumatic heart disease there is evidence of chronic heart disease
   5. in acute rheumatic fever there is evidence of erythema marginatum
2. Corticosteroids are directed primarily at what symptom in acute rheumatic fever
   1. rash
   2. fever
   3. arthritis
   4. chorea
   5. severe carditis
3. What is the most likely etiological factor of rheumatic fever
   1. streptococcus
   2. staphylococcus
   3. pneumococcus
   4. klebsiella
   5. proteus
4. What preventive antibiotic for a child with infective endocarditis should be prescribed if he is allergic to penicillin
   1. amoxicillin
   2. penicillin
   3. clindamycin
   4. ampicillin
   5. none
5. WHAT INCLUDES THE JONES MINOR CRITERIA
   1. arthralgia
   2. erythrocyte sedimentation rate
   3. chrorea
   4. fever

**Образец решения задачи/** **An example of solving the task**

1. Low-grade fever, recently increased dyspnea, petechial rash, breathing weakened, no wheezing, murmur in the III-IV intercostal space, tachycardia.
2. CBC: WBC, ESR – increase.
3. Infection endocarditis
4. Blood culture
5. Amoxicillin, 50 mg/kg (maximum 1 g) once daily for 10 days, Aspirin, 30–60 mg/kg/d, is given in four divided doses.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 4 | 3 | 1 | 3 | 3 |

**Тема/ Theme 13 «Врожденные пороки сердца у детей/Congenital heart defects in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Врожденные пороки сердца: определение, эпидемиология, этиология, классификация

2. Дефект межпредсердной перегородки: определение.

3. Дефект остия секунда: определение, патофизиология, клинические проявления, диагностика, осложнения, лечение.

4. Дефект межжелудочковой перегородки: определение, патофизиология, клинические проявления, диагностика, осложнения, лечение.

5. Патент артериального протока: определение, патофизиология, клинические проявления, диагностика, осложнения, лечение.

6. Коарктация аорты: определение, патофизиология, клинические проявления, диагностика, осложнения, лечение.

7. Тетралогия Фалло: определение, патофизиология, клинические проявления, диагностика, осложнения, лечение.

**Questions**

1. Congenital heart disease: definition, epidemiology, etiology, classification

2. Atrial septal defect: definition.

3. Ostium Secundum Defect: definition, pathophysiology, clinical manifestations, diagnosis, complications, treatment.

4. Ventricular septal defect: definition, pathophysiology, clinical manifestations, diagnosis, complications, treatment.

5. Patent Ductus Arteriosus: definition, pathophysiology, clinical manifestations, diagnosis, complications, treatment.

6. Coarctation of the aorta: definition, pathophysiology, clinical manifestations, diagnosis, complications, treatment.

7. Tetralogy of Fallot: definition, pathophysiology, clinical manifestations, diagnosis, complications, treatment.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with Congenital heart disease

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

Boy 5 months, from pregnancy II with the threat of interruption in the trimester I of pregnancy. Birth weight - 2500 g, height - 48 cm. He suffered acute respiratory infection and pneumonia 1 time.

**On examination:** weight - 4600 g, T - 36,5 °C, HR -160 beats per min, RR = 48 breaths per min. The skin is pale color, clean. Of the chest revealed a mild left precordial bulge. On palpation – systolic tremor in III-IV intercostal space on the left. Percussion border of the heart: the left – anterior axillary line, right – right parasternal line, upper – upper edge of II rib. Heart sounds loud, listen to rough systolic murmur along the left sternal border, in III – IV intercostal space on the left. In the lungs: fine moist rales on both sides, on exertion – increasing dyspnea. Liver + 5.0 cm. Spleen+1.5 cm. Urine output is saved. Stool is porridge-like, yellowish-green color, 2 times daily.

**Questions:**

1. What are the symptoms of the disease?
2. What is the initial diagnosis?
3. What additional investigation should be carried out to confirm diagnosis?
4. What is the tactic of treatment?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Indicate physiological shunts which are closed after child’s birth
   1. arterial duct
   2. duct of Arantius
   3. foramen ovale
   4. Eustachian tube
   5. Fallopian tube
2. What is the most common congenital heart defect
   1. atrial septal defect
   2. atrioventricular canal
   3. ventricular septal defect
   4. patent ductus arteriosus
   5. aortopulmonary window
3. At what gestational age congenital heart disease can appear
   1. 4–8 weeks
   2. 10–18 weeks
   3. 20–28 weeks
   4. 28–38 weeks
   5. 40–48 weeks
4. A 2-year-old child with uncomplicated coarctation of the aorta appears to be in good health. Growth and development are normal. The constriction is located just distal to the subclavian arteries. Which of the following is decreased in this patient
   1. blood flow in the lower body
   2. blood flow in the upper body
   3. blood pressure in the upper body
   4. vascular resistance in the lower body
   5. vascular resistance in the upper body
5. What is the dominant mechanism with which infants and young children increase their cardiac output
   1. by increasing ventricular contractility
   2. by increasing heart rate
   3. by increasing ventricular end-diastolic volume
   4. by decreasing heart rate
   5. by increasing respiratory rate

**Образец решения задачи/** **An example of solving the task**

1. Tachicardia - 160 beats per min, pale skin, chest revealed a mild left precordial bulge, systolic tremor in III-IV intercostal space on the left, widening the boundaries of the heart to the left, listen to rough systolic murmur along the left sternal border, in III – IV intercostal space on the left, in the lungs: fine moist rales on both sides, on exertion – increasing dyspnea.
2. Congenital heart disease: Ventricular Septal Defect.
3. Electrocardiography, Echocardiography, Chest X-ray.
4. Surgical or catheterization closure

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 3 | 3 | 1 | 1 | 2 |

**Модуль/** **Module 4 «Болезни органов пищеварения у детей/The Digestive System diseases in children»**

**Тема/Theme 14 «Функциональные расстройства пищеварения у детей, язвенная болезнь, острый панкреатит, холецистит/Functional abdominal pain, Peptic ulcer disease, Acute pancreatitis, Diseases of the gallbladder»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Функциональная боль в животе (неорганическая хроническая боль в животе): патофизиология, оценка и диагностика, лечение.

2. Язвенная болезнь у детей: патогенез, клиника, диагностика, лечение.

3. Острый панкреатит: клинические проявления, диагностика, лечение, прогноз.

4. Заболевания желчного пузыря: аномалии, острые отеки, холецистит и желчнокаменная болезнь, дискинезия желчевыводящих путей.

**Questions**

1. Functional abdominal pain (nonorganic chronic abdominal pain): pathophysiology, evaluation and diagnosis, treatment.
2. Peptic ulcer disease in children: pathogenesis, clinical manifestations, diagnosis, treatment.
3. Acute pancreatitis: clinical manifestations, diagnosis, treatment, prognosis.
4. Diseases of the gallbladder: anomalies, acute hydrops, cholecystitis and cholelithiasis, biliary dyskinesia.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with chronic abdominal pain

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A nine-year-old boy was admitted to pediatric gastroenterology unit with complaints on abdominal pain, vomiting, loss of appetite.

**Medical history** revealed frequents respiratory infections treated with antibiotics and symptomatic drugs, including administration of antipyretics until the age of six.

**Family history** showed that both his parents and maternal grandmother had Helicobacter pylori infection and maternal grandfather had perforated gastric ulcer surgically treated. The boy presented mild diffuse abdominal pain started from approximately one month prior to admission.

Two days before presenting to the hospital, once with a psychological stress (sport competition), the pain became important and the boy started to vomit (alimentary and bilious) and presented melena.

**Physical examination** on admission revealed a well-developed and well-nourished boy, with grade I obesity (W = 50 kg, H = 130 cm, BMI – 30 kg/m2).

Vital signs: temperature 36.6ºС, HR-87 beats per min, RR-18 breaths per min, BP-115/78 mmHg; normal shaped head, no sign of cranial trauma, equal and reactive pupils, normal nostrils, was well hydrated mouth without oral lesions, moist mucous membranes, pale skin color; normal pulmonary and cardiac auscultation; epigastric and umbilical pain without muscular defence, positive bowel sounds, melena, no hepatosplenomegaly was noted; warm extremities without clubbing, edema or cyanosis; no neurologic focal deficits.

**Investigation**

**CBC:** Hb-112 g/L, RBC-4,8x 1012/L, PLT - 320 x109/L, WBC -15х109/L, NEUT-67.9%, EO-1%, LYMPH-25%, MONO-6%, BASO-0.1, ESR - 20 mm/hour.

**An upper digestive endoscopy** revealed diffuse congestion in the lower esophagus, normal cardia, hyperemic gastric mucosa with a 2 cm linear ulcer Forrest III with edematous base and fibrin and another two linear ulcers of 0.5-1 cm in the antral region.

**Questions:**

1. What are clinical signs of disease?
2. Assess the results of the investigations.
3. What is your initial diagnosis?
4. Assign treatment.

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What disorder includes long-lasting intermittent or constant abdominal pain that is functional or organic (disease based)
2. chronic abdominal pain
3. functional abdominal pain
4. functional abdominal pain syndrome
5. irritable bowel syndrome
6. Primary peptic ulcers are most often caused by
7. systemic mastocytosis
8. H.pyloriinfection
9. hypersecretory states
10. short bowel syndrome
11. The first-line drugs for the treatment of gastritis and peptic ulcer disease in children are
12. cytoprotective agents and H2 receptor antagonists
13. antibiotics and proton pump inhibitors
14. proton pump inhibitors and H2 receptor antagonists
15. antibiotics and cytoprotective agents
16. Severe abdominal pain, persistent vomiting, and possibly fever are the clinical manifestations of
17. peptic ulcer disease
18. chronic pancreatitis
19. severe acute pancreatitis
20. mild acute pancreatitis
21. What are the most important clinical features of cholelithiasis
22. abdominal pain associated with alteration in bowel movements
23. recurrent abdominal pain, which is often colicky and localized to the right upper quadrant
24. abdominal pain or discomfort in the upper abdomen
25. jaundice, abdominal pain, and weight loss

**Образец решения задачи/** **An example of solving the task**

1. Epigastric and umbilical pain without muscular defence, vomiting, loss of appetite,
2. CBC: RBC, HGB are normal, WBC, ESR, MONO – increase. An upper digestive endoscopy: acute gastritis with multiple ulcers in the antral region of the stomach
3. Ulcer disease: multiple ulcers in the antral region, acute stage, increased acid-forming function of the stomach,H pylori infection – unknown.
4. H2-receptor antagonists and PPIs in 4–8 weeks, 7- to 14-day courses of sucralfate, amoxicillin, clarithromycin of 10 days.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 1 | 2 | 3 | 4 | 2 |

**Модуль/** **Module 5 «Болезни почек у детей/Kidney diseases in children»**

**Тема/ Theme 15 «Пиелонефрит у детей/ Pyelonephritis in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Определение инфекций мочевых путей

2. Определение пиелонефрита,

3. Определение цистита

4. Определение бессимптомной бактериурии

5. Определение пиурии

6. Определение стерильной пиурии

7. Определение гидронефроза

**Questions**

1. Definition of Urinary Tract Infections
2. Definition of Pyelonephritis,
3. Definition of Cystitis
4. Definition of Asymptomatic bacteriuria
5. Definition of Pyuria
6. Definition of Sterile pyuria
7. Definition of hydronephrosis

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with Urinary Tract Infections

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

This is a 4 month old female who presents to the office with a chief complaint of fever, vomiting, and loose stools. She has had tactile fever for 3 days, and had 5-6 episodes of emesis on the first day of illness. Stools were liquid on the first and second days of illness. Vomiting and diarrhea have resolved, but she is breast-feeding less well than usual. Her mother notes that her urine seems "strong" and that she is not as playful as usual. She has had no known ill contacts. She has no cough, upper respiratory infection symptoms, or rash. Past history is unremarkable and she is on no medications.

**Physical examination:** T - 38.9ºC, HR-164bpm, RR-40/m, Wt. 5.3kg (150gm below her pre-illness weight). She is alert, smiling, active, not toxic, and in no distress. Her anterior fontanel is soft and flat. Her eyes and oral mucosa exams are normal. Her neck is supple. Her skin is warm and well perfused, with no rash. Heart rate is regular without murmurs. Lungs are clear and her respirations are normal. Her abdomen is flat, soft, but painful when palpated in the kidney, without hepatosplenomegaly. Her external genitalia are normal. Her back exam reveals no deformities or cutaneous defects. Her neurologic exam shows normal tone, strength, and activity.

**Investigation**

**CBC:** Hb-122 g/L, RBC-4,8x 1012/L, PLT - 389 x109/L, WBC -19.4х109/L, NEUT-51%, EO-2%, LYMPH-44%, MONO-3%, ESR - 20 mm/hour.

**Urine analysis**: specific gravity – 1018, protein – abs., RBC – 0–1 of visual field, WBC – 20-30 of visual area.

**Questions:**

1. What are clinical signs of disease?
2. Assess the results of the investigations and the medical history.
3. What is your initial diagnosis?
4. Which additional investigation should be carried out?
5. Assign treatment.

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Urinary tract infections are much more common in uncircumcised boys, especially in the age
   1. 1st yr of life
   2. 2nd yr of life
   3. 3rd yr of life
   4. 4th yr of life
2. Involvement of the renal parenchyma is termed
   1. cystitis
   2. acute pyelonephritis
   3. pyelitis
   4. pyelonephritic scarring
3. What symptom may be the only manifestation of pyelonephritis
   1. flank pain
   2. malaise
   3. fever
   4. abdominal pain
4. The child is considered to have a urinary tract infections, if the culture shows
   1. >50,000 colonies of a single pathogen (supra-pubic or catheter sample)
   2. >60,000 colonies of a single pathogen (supra -pubic or catheter sample)
   3. >70,000 colonies of a single pathogen (supra -pubic or catheter sample)
   4. >80,000 colonies of a single pathogen (supra -pubic or catheter sample)
5. If treatment of acute cystitis is initiated before the results of a culture and sensitivities are available, a 3- to 5-day course of therapy with
   1. nitrofurantoin
   2. cephalosporinum
   3. ceftriaxone
   4. trimethoprim-sulfamethoxazole

**Образец решения задачи/** **An example of solving the task**

1. Fever, vomiting, and loose stools, urine seems "strong", painful abdomen with palpation in the kidney.
2. CBC: WBC, ESR – increase. **Urine analysis**: WBC – increase; RBC, protein – appears.
3. Urinary tract infection: Pyelonephritis. She has had fever for 3 days, stools, vomiting, but she is breast-feeding less well than usual. Her mother notes that her urine seems "strong" and that she is not as playful as usual.
4. Ultrasonography (kidney, blade)
5. Amoxicillin, 7–10 days.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 1 | 2 | 3 | 1 | 4 |

**Тема/ Theme 16 «Гломерулонефрит у детей/Glomerular Disease in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Введение в клубочковые заболевания: анатомия клубочков, клубочковая фильтрация, клубочковые заболевания.

2. Клиническая оценка ребенка с гематурией

3. Иммуноглобулин А нефропатия (нефропатия Берже): патология и патологическая диагностика, клинико-лабораторные проявления, прогноз и лечение.

4. Острый постстрептококковый гломерулонефрит: этиология и эпидемиология, патология, патогенез, клинические проявления, диагностика, осложнения, профилактика, прогноз и лечение.

5. Мембранозная нефропатия: патология, патогенез, клинические проявления, диагностика, прогноз и лечение.

6. Мембранопролиферативный гломерулонефрит: патология, клинические проявления, прогноз и лечение.

**Questions**

1. Introduction to Glomerular Diseases: Anatomy of the Glomerulus, Glomerular Filtration, Glomerular Diseases.
2. Clinical Evaluation of the Child with Hematuria
3. Immunoglobulin A Nephropathy (Berger Nephropathy): pathology and pathologic diagnosis, clinical and laboratory manifestations, prognosis and treatment.
4. Acute Poststreptococcal Glomerulonephritis: etiology and epidemiology, pathology, pathogenesis, clinical manifestations, diagnosis, complications, prevention, prognosis and treatment
5. Membranous nephropathy: pathology, pathogenesis, clinical manifestations, diagnosis, prognosis and treatment.
6. Membranoproliferative glomerulonephritis: pathology, clinical manifestations, prognosis and treatment.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with Glomerular Diseases

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 9-year-old boy is at a hospital with puffy eyes and scant urine. His general health has been good until 2 weeks ago when he developed a sore throat and swollen glands. An antibiotic was started at that time.

**Examination**: T -36.7 ºC, HR -100 beats per min, RR -20 breaths per min, BP- 150/90mmHg. He looks sick, facial swelling and edema in his feet. The exam is a positive for mild sore throat. In lungs vesicular breathing, no wheezing, heart sounds loud rhythmic. Abdomen: liver size normal, painless during palpation. Stool is dark brown, soft. Urinating is normal.

**Investigation:**

**CBC:** Hb-122 g/L, RBC-4,3x 1012/L, WBC -8х109/L, HCT-26%, PLT - 350 x109/L, ESR - 12 mm/hour.

**Urine analysis**: cloudy, amber; specific gravity - 1019, RBC – 10-20 of visual field, WBC – 2-6 of visual field, 1+protein. Urine protein is 2 g/24 hr.

**Blood and urine cultures** - negative.

**Laboratory testing** reveals a serum creatinine level of 1.8 mg/dL, albumin level of 3.2 g/dL (normal, 3.3– 5.2 g/dL), anti– streptolysin O titer of 530 U (normal, < 200 U), and an antinuclear antibody titer of 1:20 (> 1:40 is abnormal).

**Questions:**

1. What are clinical signs of disease?
2. Assess the results of the investigations and the medical history.
3. What is your initial diagnosis?
4. Which additional investigation should be carried out?
5. Assign treatment.

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Acute nephritic syndrome is characterized by
   1. glycosuria
   2. oxaluria
   3. the sudden onset of gross hematuria
   4. uraturia
2. Urinalysis in acute poststreptococcal glomerulonephritis demonstrates
   1. red blood cells
   2. platelets
   3. macrophages
   4. eosinophils
3. Laboratory findings in acute poststreptococcal glomerulonephritis include
   1. ↓antistreptolysin O titers
   2. ↑antistreptolysin O titers
   3. negative streptozyme
   4. ↑C3-C9
4. The primary membranous nephropathy is
   1. membranous nephropathy where nephropathy is associated with other identifiable systemic diseases
   2. membranous nephropathy where nephropathy is associated with medications
   3. membranous nephropathy is associated with pneumonia
   4. idiopathic form, where there is isolated renal disease
5. Glomeruli with an accentuated lobular pattern from diffuse mesangial expansion, endocapillary proliferation, and an increase in mesangial cells and matrix are the histologic criteria of
   1. type I membranoproliferative glomerulonephritis
   2. type II membranoproliferative glomerulonephritis
   3. acute poststreptococcal glomerulonephritis
   4. C3 glomerulonephritis

**Образец решения задачи/** **An example of solving the task**

1. Scant urine, edema of the face and swelling of the feet, high blood pressure, mild sore throat.
2. **CBC:** ESR – increase. **Urine analysis**: RBC, protein – significant amount; ASO – increase.
3. Acute Glomerulonephritis (Poststreptococcal)
4. Ultrasonography (kidney), kidney biopsy kidney biopsy in the absence of the effect of treatment
5. Patients with the acute nephritic syndrome with severe hypertension and complication require hospitalization. Bed rest is difficult to enforce and is of unproven value, yet most children keep it on their own while they are in the acute phase. Restrictions of fluid and sodium intake. Penicillin or, erythromycin, diuretics (1-2 mg/kg, maximum upto 10 mg/kg IV or orally every 12 h), Nifedipine (0.5 – 2 mg/ kg in children, every 4–6 h).

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 3 | 1 | 2 | 4 | 1 |

**Модуль/** **Module 6 «Болезни органов дыхания/Respiratory diseases in children»**

**Тема/ Theme 17 «Острые бронхиты и пневмония у детей/Acute bronchitis, pneumonia in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Острый бронхит у детей: этиология, патогенез.

2. Симптомы, диагностика острого бронхита у детей.

3. Острый бронхит у детей: лечение, профилактика.

4. Пневмония у детей: этиология, патогенез.

5. Симптомы, диагностика, осложнения пневмонии у детей.

6. Пневмония у детей: лечение, профилактика.

**Questions**

1. Acute bronchitis in children: etiology, pathogenesis.
2. Symptoms, diagnostics of acute bronchitis in children.
3. Acute bronchitis in children: treatment, prevention.
4. Pneumonia in children: etiology, pathogenesis.
5. Symptoms, diagnostics, complications of pneumonia in children.
6. Pneumonia in children: treatment, prevention.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation (a survey plan) for suspected pneumonia in children

**Типовые практические задания для проверки умений/Typical practical tasks for testing skills:**

Boy 10 months old.

**Anamnesis:** from history it is known that the child from the 2nd pregnancy (1st abortion), birth weight 3250 g, height 51 cm, Apgar score 4/6 points. 2 weeks ago, for the first time the child had upper respiratory tract infection (acute purulent otitis media), received amoxicillin.

**History of disease:** three days ago the temperature increases to febrile digits, then a cough and problems with nasal breathing appeared.

**Examination:** hyperthermia -38.7 C. Skin pale with a marble pattern. Perioral cyanosis is present. Frequent unproductive coughing. Intercostal, sub-ribbed and suprastrastnogo retractions, nasal burning, were identified. The respiration rate is 60 breaths per minute. Auscultation of the chest reveal the breathing is heavy, decreased breath sounds in the lower right part, there is a wet wheezing. Heart tones are clear and rhythmic. HR 128 beats per minute. Liver +1.5 cm Urine output is adequate.

**Investigations:**

**CBC**: RBC 4.76 x1012/l, PLT - 319 WBC - 18.4 x109/l, Stab neutrophil - 2%, segment neutrophil- 69%, LYM - 22%, MON - 7%; ESR - 25 mm/h

**Biochemical analysis of blood:** CRP - 12 g/l (normal 6 g/l)

**Chest X-ray** - pneumatization reduced at right lung fields in the projection of the middle lobe, repeating its outlines, by inflammatory infiltration. The shadow of the heart on the right side against the background of infiltration is not clearly observed. The sinuses are free.

**Questions:**

1. What are the main symptoms?
2. Evaluate the results of investigation.
3. What is your initial diagnosis?
4. What treatment does the patient need?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What are the most common pathogens as the main cause of hospitalization and death from bacterial pneumonia among children
2. Mycoplasma pneumoniae and Chlamydophila pneumoniae
3. Streptococcus pneumoniae and Respiratory syncytial virus
4. Streptococcus pneumonia and Haemophilus influenzae
5. Mycobacterium tuberculosis and atypical mycobacteria
6. Inflammation of pneumonia caused by staphylococcus aureusis characterized by
   1. areas of hemorrhagic necrosis, resulting in pneumatoceles, empyema, or, bronchopulmonary fistulas
   2. inhibits ciliary action, and leads to cellular destruction and an inflammatory response in the submucosa.
   3. produces local edema that aids in the proliferation of microorganisms and their spread into adjacent portions of lung, often resulting in the characteristic focal lobar involvement.
7. Recurrent pneumonia is defined as
   1. less than 2 episodes in a single year or less than 3 episodes ever, with radiographic clearing between occurrences
   2. 2 or more episodes in a single year or 3 or more episodes ever, with radiographic clearing between occurrences.
   3. less than 2 episodes in a single year or 3 or more episodes ever, with radiographic clearing between occurrences
   4. 2 or more episodes in a single year or less than 3 episodes ever, with radiographic clearing between occurrences
8. Confluent lobar consolidation is typically seen with
   1. pneumococcal pneumonia
   2. mycoplasmal pneumonia
   3. chlamydical pneumonia
   4. viral pneumonia
9. The total duration of antibiotics treatment (amoxicillin)
   1. should not be less than 6 days
   2. should not be less than 8 days
   3. should not be less than 10 days
   4. should not be less than 12 days

**Образец решения задачи/** **An example of solving the task**

1. Hyperthermia, perioral cyanosis, frequent unproductive coughing, intercostal, sub-ribbed and suprastrastnogo retractions, nasal burning, short-windedness, decreased breath sounds in the lower right part, there is a wet wheezing.
2. CBC: WBC – increased, left sift, ESR is accelerate, CRP – increased, Chest X-ray - right side - inflammatory infiltration.
3. Pneumonia in rite size.
4. Antibiotic therapy (ampicillin)

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 3 | 1 | 2 | 1 | 3 |

**Тема/ Theme 18 «Бронхиальная астма: клиника, патогенез, диагностика/Bronchial asthma in children:clinical manifestation, pathogenesis, diagnosis»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Детская астма: этиология, патогенез.

2. Симптомы детской астмы.

3. Диагностика детской астмы.

**Questions**

1. Childhood Asthma: etiology, pathogenesis.
2. Symptoms of Childhood Asthma.
3. Diagnostics of Childhood Asthma.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation (a survey plan) for a child with Asthma

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

**Patient** is a 5-year-old boy

**Complaints:** his mother complained of shortness of breath, coughing, wheezing. Dyspnea developed shortly after the onset of low-grade fever and rhinorrhea.

**Background:** he did not have a significant prehistory. Born in the hospital. Weight at birth: 3.5 kg. He had exclusive breastfeeding to 1 year. Currently he is on family diet with balance and adequate amount of fish, meat and rice.

**Family history:** 2nd child out of 3 siblings. His father has asthma currently on medication. Grandmother in paternal side also has asthma. Elder sister is 13 years old and younger sister is 13 months old. Both of them are well.

**Social:** he lives with parents and 2 siblings. Father is a worker. Father is a smoker but did not smoke inside the house or near the patient. Mother is a housewife. Live in their owning house. Don’t have any cats or carpet in house.

**History of disease:** his first wheezing presentation was of episodic viral infection. Bronchial asthma confirmed a year ago, basic therapy is not received. Further history reveals that he has had 4 episodes of acute wheezing in the past 12 months. Each episode followed an upper respiratory tract infection, and the episodes seem to be getting progressively worse, both in duration and in severity.

**Allergic anamnesis**: no known allergies.

**Immunisation:** up to his age. Didn't have any complications after taking the injections

**Examination:** his weight and height plotted on the 25th centile. Skin is clean. He had a wet, unproductive coughing. His chest was hyperinflated. He had dyspnea, RR 40 breaths per minutes. Auscultation- had wheezes bilaterally. Heart sounds loud, rhythmic. HR 100 beat per minute. The abdomen is soft and painless. Liver+1.0 cm. The spleen is not palpable. Stool and urine output are normal.

**Investigations**

**Chest X-ray:** without significant infiltrates

**Peak expiratory flow** was 80% expected.

**Questions:**

1. What are the main symptoms?
2. Assess the family history, social anamnesis, history of disease and allergy anamnesis.
3. Evaluate the results of investigation.
4. Diagnose according to classification

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Recurrent wheezing episodes in early childhood are associated with
2. bacterial infection
3. fungal infection
4. virus infection
5. parasitic infestations
6. The major early childhood risk factor for persistent asthma is
7. parent asthma
8. allergic rhinitis
9. wheezing apart from colds
10. ≥4% peripheral blood eosinophils food allergen sensitization
11. There are 2 common types of childhood asthma based on different natural courses, it is
12. early childhood asthma and chronic asthma
13. preschool asthma and school asthma
14. recurrent wheezing in early childhood and chronic asthma
15. recurrent wheezing in early childhood and school asthma
16. According to treatment response and medication requirements, refractory asthma is when
17. well controlled with low levels of daily controller therapy
18. well controlled with multiple and/or high levels of controller therapies
19. despite being well controlled, continue to have severe exacerbations
20. continue to have poorly controlled asthma despite multiple and high levels of controller therapies
21. What is the diurnal variation in peak exhalation (pef) that corresponds to asthma
22. 10%
23. 20%
24. >20%
25. >30%

**Образец решения задачи/** **An example of solving the task**

1. Shortness of breath, coughing, wheezing, wet, unproductive coughing, dyspnea, wheezes bilaterally.
2. Family and social anamnesis is burdened: Grandmother and father have asthma and dad smokes, the boy had 4 episodes of acute wheezing in the past 12 months after an upper respiratory tract infection.
3. Chest X-ray - without pathology, peak expiratory flow was reduced
4. Bronchial asthma, exacerbation.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 3 | 1 | 3 | 4 | 3 |

**Тема/ Theme 19 «Лечение бронхиальной астмы у детей/ Treatment of bronchial asthma in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Лечение астмы у детей.

2. Осложнения детской астмы у детей.

3. Мониторинг детской астмы у детей.

4. Профилактика детской астмы у детей.

**Questions**

1. Treatment of Childhood Asthma in children.
2. Complications of Childhood Asthma in children.
3. Monitoring of Childhood Asthma in children.
4. Prevention of Childhood Asthma in children.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a treatment plan for children with asthma

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

**Patient** is a 3-year-old boy

**Complaints:** his mother complained of coughing and shortness of breath every night for 1 week.

**Background:** born in the hospital. Weight at birth: 3.5 kg. He had exclusive breastfeeding to 1 month. His past history is notable for eczema and dry skin since infancy. Currently he is on family diet with balance and adequate amount of fish, meat, milk and eggs.

**Family history:** 2nd child in the family. His father and mother are healthy. His brother has asthma.

**Social anamnesis:** he lives with parents and brother. Father is a judge. Mother is a housewife. Live in their owning house. In his home environment, there are no smokers or pets.

**History of disease:** he is sick during the week, when after the respiratory infection there appear nocturnal episodes of dyspnea. His parents have been using decongestant/antihistamine syrup.

**Allergic anamnesis**: he has no known allergies to foods or medications.

**Immunisation:** he had fully immunized. Didn't have any complications after taking the injections

**Examination**: T 36.5C, P-110, RR - 44, BP -85/65, oxygen saturation 96% in room air. He is alert and cooperative in minimal distress if any. His eyes are clear, nasal mucosa is boggy with clear discharge, and his pharynx has moderate lymphoid hypertrophy. His skin is dry, but not flaky, inflamed or thickened. He has multiple small lymph nodes palpable in his upper neck. His chest has an increased diameter and it is tympanitic (hyperresonant) to percussion. Rhonchi and occasional wheezes are heard on auscultation, but there are no retractions. Heart is a regular rhythm and no murmurs are heard. The abdomen is soft and painless. The spleen is not palpable. Stool and urine output are normal.

**Questions:**

1. What are the main symptoms?
2. Diagnose according to classification
3. What is the recommended step for initial therapy?
4. What quick-reliever medications and technique should be used in this case at home?
5. How often should regular assessment and monitoring be carried out?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What directs the initial level of asthma therapy
   1. assessment of factors risk
   2. assessment of asthma severity
   3. assessment of comorbid condition
   4. evaluation of asthma duration
2. In assessing asthma severity, impairment consists of an assessment of
   1. short-acting beta2-agonists usage for quick relief
   2. patient's symptom frequency last year
   3. inhaled corticosteroids usage for therapy
   4. number of clinic visits last year
3. Long-term control therapy should be initiated for infants or children with persistent asthma in the absence of frequent symptoms if they have
   1. can participate in normal or desired activities
   2. short-acting beta2-agonists is rarely used for rapid relief
   3. have 4 visits to the clinic last year
   4. 2 or more exacerbations in 6 mo requiring systemic corticosteroids
4. For young children (≤4 yr) with moderate or severe persistent asthmais recommended:
   1. SABA monotherapy
   2. leukotriene receptor antagonist monotherapy
   3. medium-dose inhaled corticosteroids monotherapy
   4. nonsteroidal antiinflammatory agents monotherapy
5. The medication for daily inhaled corticosteroids therapy for patients with persistent asthma is
   1. Methylprednisolone
   2. Mometasone
   3. Montelukast
   4. Omalizumab

**Образец решения задачи/** **An example of solving the task**

1. Coughing and shortness of breath every night for 1 week, hyperinflated chest, percussion of the chest is a tympanitic (hyperresonant), rhonchi and occasional wheezes are heard on auscultation.
2. Bronchial asthma, manifestation.
3. Step 2: low dose ICS Budosonide (nebules) 250mcg 2 times a day for at least 2-3 months
4. As-need short-acting beta2-agonist
5. Every 2-3 months

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 2 | 1 | 4 | 3 | 2 |

**Модуль/** **Module 7 «Болезни эндокринной системы у детей/Endocrine diseases in children»**

**Тема/ Theme 20 «Сахарный диабет у детей/Diabetes Mellitus in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Сахарный диабет у детей: классификация. Сахарный диабет 1 типа (иммуноопосредованный): этиология, патогенез.

2. Симптомы, диагностика сахарного диабета 1 типа (опосредованного иммунитетом). Лечение осложнений сахарного диабета 1-го типа (опосредованного иммунитетом).

3. Диабетический кетоацидоз. Мониторинг.

4. Сахарный диабет 2 типа: этиология, патогенез.

5. Симптомы, диагностика сахарного диабета 2 типа.

6. Лечение, осложнения сахарного диабета 2 типа.

**Questions**

1. Diabetes Mellitus in Children: Classification. Type 1 Diabetes Mellitus (Immune Mediated): etiology, pathogenesis.
2. Symptoms, diagnostics of Type 1 Diabetes Mellitus (Immune Mediated). Treatment, complications of Type 1 Diabetes Mellitus (Immune Mediated).
3. Diabetic Ketoacidosis. Monitoring.
4. Type 2 Diabetes Mellitus: etiology, pathogenesis.
5. Symptoms, diagnostics of Type 2 Diabetes Mellitus.
6. Treatment, complications of Type 2 Diabetes Mellitus.

**Задания для отработки практических умений**

**Tasks for practicing practical skills**

Make a treatment plan for children with Diabetes Mellitus

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

The girl is 7 year old.

**Complaints:** she complained of severe polyuria, polydipsia and lethargy.

**Anamnesis:** history or family history of various diseases has not been reported.

She was previously healthy with no past admissions or serious illness. She had no change of eating habits and lifestyle recently.

**History of disease:** she had a 3-day history of frequent urination (3–4 times every hour), polydipsia, and lethargy. Although she drank more beverage than usual, she felt excessive thirst and lost weight from 22 to 19.6 kg in 7 days. She had recently moved to a new house and was having a hard time fitting in at the new school. The girl visited the emergency department.

**Examination:** height was 127.4 cm (50th–75th percentile), weight was 19.6 kg (5th–10th percentile), and body mass index (BMI) was 12.08 kg/m2 (below first percentile). Her temperature was 37.2°C, heart rate was 88 beats/min, respiratory rate was 18 beats/min, blood pressure was 100/60 mm Hg, and pulse oximetry was 100% on room air. Her mental status was normal, sensation was intact, and motor strength was quite good considering her condition. However, she looked cachectic and lethargic. Auscultation - vesicular breathing, without wheeze. Heart sounds loud, rhythmic. The abdomen is soft and painless. The spleen is not palpable. Stool and urine output are normal.

**Questions:**

1. What are the main symptoms?
2. What is your initial diagnosis?
3. What investigations is need?
4. With what diseases it is necessary to differentiate?
5. What kind of emergency aid is needed?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Diabetes mellitus is
   1. a common, chronic, metabolic disease characterized by hyperinsulinemia as a cardinal feature
   2. a common, chronic, metabolic disease characterized by hyperglycemia as a cardinal biochemical feature
   3. a common, chronic, metabolic disease characterized by hypoglycemia as a cardinal biochemical feature
   4. a common, chronic, metabolic disease manifests clinically with polyuria and polydipsia
2. The upper limit of the "normal" fasting glucose concentration is
   1. 90 mg/dL (5.0 mmol/L)
   2. 99 mg/dL (5.5 mmol/L)
   3. 100 mg/dL (5.6 mmol/L)
   4. 108 mg/dL (6.0 mmol/L)
3. The natural history includes stage
   1. preclinical stage
   2. nonimmune stage
   3. metabolic stage (impaired glucose tolerance)
   4. insulin resistance stage
4. Falsely low hba1c levels are noted in
   1. type 2 diabetes mellitus
   2. impaired glucose tolerance
   3. type 1 diabetes mellitus
   4. myelodysplasia
5. Ketone bodies are
   1. principally β-hydroxybutyrate and acetoacetate
   2. lipid, cholesterol
   3. free fatty acids and glucagon
   4. cholesterol and free fatty acids

**Образец решения задачи/** **An example of solving the task**

1. Polyuria, polydipsia and lethargy, lost weight, low graduate temperate.
2. I type Diabetes militancy
3. Blood sugar, urinary analysis.
4. Diabetes insipidus
5. Intravenous injection glucose with insulin

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 2 | 2 | 1 | 4 | 1 |

**Тема/Theme 21 «Болезни щитовидной железы у детей/Disorders of the Thyroid Gland in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Заболевания щитовидной железы у детей: гипотиреоз: этиология, патогенез. Симптомы. Диагностика. Лечение. Профилактика.

2. Хронический лимфоцитарный тиреоидит (тиреоидит Хашимото, аутоиммунный тиреоидит): этиология, патогенез. Симптомы. Диагностика. Лечение. Профилактика.

3. Зоб: этиология, патогенез. Симптомы. Диагностика. Лечение. Профилактика.

4. Гипертиреоз: этиология, патогенез. Симптомы. Диагностика. Лечение. Профилактика.

**Questions**

1. Disorders of the Thyroid Gland in Children: Hypothyroidism: etiology, pathogenesis. Symptoms. Diagnostics. Treatment. Prevention.
2. Chronic lymphocytic thyroiditis (Hashimoto thyroiditis, autoimmune thyroiditis): etiology, pathogenesis. Symptoms. Diagnostics. Treatment. Prevention.
3. Goiter: etiology, pathogenesis. Symptoms. Diagnostics. Treatment. Prevention.
4. Hyperthyroidism: etiology, pathogenesis. Symptoms. Diagnostics. Treatment. Prevention.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a treatment plan for children with Thyroid Gland diseases

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

The boy is 5 days old.

**Anamnesis:** from history it is known that the child from the 2nd pregnancy (1st abortion), birth weight 4250 g, height 52 cm, Apgar score 6/8 points.

**Examination:** his temperature - 35.8 C. Head size is normal, but posterior fontanel larger than 0.5 cm. The skin is cold, pale and mottled with a marble pattern. Edema of the genitals is present. Abdominal examination revealed generalized abdominal distention with umbilical hernia. Neurological examination showed generalized hypotonia and hyporeflexia. The respiration rate is 36 breaths per minute. Auscultation of the chest: breathing is puerile. Heart tones are clear and rhythmic. HR 90 beats per minute. Liver +1.5 cm. Urine output is adequate. Stool once a day. The child is calm on examination, sometimes falls asleep.

**Questions:**

1. What are the main symptoms?
2. What is your initial diagnosis?
3. What investigations is need?
4. What treatment does the infant need?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Primary hypothyroidism is the results
   1. from deficient production of thyroid hormone due to the defect in the gland itself
   2. of inadequate production of thyroid hormone due to reduced thyroid-stimulating hormone stimulation
   3. from production of thyroid-stimulating immunoglobulin that binds to and activates the G-protein–coupled thyroid-stimulating hormone receptor
   4. of gain-of-function germline mutations in the thyroid-stimulating hormone receptor receptor
2. The recommended daily allowance of iodine for adults
   1. ≥100 μg/day
   2. 100-299 μg/day
   3. ≥150 μg/day
   4. ≥300 μg/day
3. The temperature is subnormal, often <35°c, the skin, particularly that of the extremities, may be cold and mottled, the baby is cry little, sleep much, have poor appetites are generally sluggish these are signs of
4. congenital hypothyroidism
5. congenital goiter
6. congenital hyperthyroidism
7. congenital carcinoma
8. Measurement of thyroid-stimulating immunoglobulin or thyrotropin-binding inhibitory immunoglobulin is useful in confirming the diagnosis of
   1. hypothyroidism
   2. congenital goiter
   3. hyperthyroidism (Graves disease)
   4. carcinoma of the thyroid
9. The replacement treatment with levothyroxine (at doses specific for size and age) is indicated for
   1. hypothyroidism
   2. congenital goiter
   3. hyperthyroidism (Graves disease)
   4. carcinoma of the thyroid

**Образец решения задачи/** **An example of solving the task**

1. High birth weight, birth at 42 weeks gestation, low Apgar score (6/8 points), and body temperature, posterior fontanel large, skin is cold, pale and mottled with a marble pattern, edema of the genitals, umbilical hernia, muscles hypotonia and hyporeflexia, bradycardia, constipation.
2. Congenital hypothyroidism.
3. T3,T4, TTG.
4. L-thyroxine

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 1 | 3 | 1 | 3 | 1 |

**Модуль/** **Module 8 «Инфекционные заболевания у детей/Infectious Diseases in children»**

**Тема/ Theme 22 «Инфекционные заболевания у детей: менингококковая инфекция, дифтерия/Infectious Diseases in children: Diphtheria, Meningococcal disease»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Дифтерия: этиология, эпидемиология, трансмиссия, патогенез.

2. Клинические проявления, диагностика дифтерии.

3. Осложнения дифтерии.

4. Дифтерия: лечение, прогноз, профилактика.

5. Менингококковая инфекция: этиология, эпидемиология, патогенез.

6. Патофизиология, клинические проявления, диагностика менингококковой инфекции.

7. Менингококковая инфекция: лечение, осложнения, прогноз, профилактика.

**Questions**

1. Diphtheria**:** etiology, epidemiology, transmission, pathogenesis.
2. Clinical manifestations, diagnosis of diphtheria.
3. Complications of diphtheria.
4. Diphtheria**:** treatment, prognosis, prevention.
5. Meningococcal disease: etiology, epidemiology, pathogenesis.
6. Pathophysiology, clinical manifestations, diagnosis of meningococcal disease.
7. Meningococcal disease: treatment, complications, prognosis, prevention.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with Diphtheria
2. Make a plan investigation for a child with Meningococcal disease

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 14-year-old immunocompetent male presented to the emergency room with complaint of high grade fever for two days and rash over the extremities for the past one day. The rash was widespread covering all four limbs, purpuric and associated with ecchymosis. The patient did not complain of headache or photophobia. There was clinical evidence of nuchal rigidity.

**CBC:** Hb - 122 g/L, RBC - 4,3x 1012/L, WBC - 21х109/L, HCT - 26%, PLT - 120 x109/L, ESR - 20 mm/hour.

**Questions:**

1. What is your initial diagnosis? Assess the laboratory tests.
2. What etiology factor causes this condition?
3. Which additional investigation should be carried out to confirm diagnosis?
4. What is the treatment regimen?
5. What is the prevention of the disease?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What biotype of c. Diphtheriae is capable of causing diphtheria
   1. C. pseudotuberculosis
   2. C. glutamicum
   3. C. minutissimum
   4. C. mitis
2. What method is used to diagnose diphtheria
   1. bone marrow puncture
   2. culture isolates of portion of membrane
   3. CBC
   4. biochemical blood test
3. At what age is the highest rate of meningococcal disease
   1. infants younger than 1 yr old
   2. children 1-3 yr of age
   3. children 3-5 yr of age
   4. children 5-14 yr of age
4. Through what time of duration of meningococcal disease does chronic meningococcemia develop
   1. duration of illness of 2-4 wk
   2. duration of illness of 4-6 wk
   3. duration of illness of 6-8 wk
   4. duration of illness of 8-10 wk
5. What is the regimen for meningococcal vaccination for children at the age 2-18 months with asplenia and immune (complement) deficiency
   1. 2 doses of Hib-MenCY-TT at 2, 4, 6, and 12-15 months
   2. 3 doses of Hib-MenCY-TT at 2, 4, 6, and 12-15 months
   3. 4 doses of Hib-MenCY-TT at 1, 3, 6, and 12-15 months
   4. 4 doses of Hib-MenCY-TT at 2, 4, 6, and 12-15 months

**Образец решения задачи/** **An example of solving the task**

1. Meningococcal Disease: Meningococcal meningitis, meningococcal septicemia
2. Meningococcal disease (MD) caused by the gram negative diplococcus N meningitidis is associated with high morbidity and mortality. It primarily affects children and young adults in developing countries of Asia and Africa. Infection is acquired through close contact with airborne droplets of infected nasopharyngeal secretions.
3. Lumbar puncture (cerebrospinal fluid culture); Biopsy of skin lesions revealed gram negative diplococci consistent with N meningitides; blood culture; meningococcal antigen detection and polymerase chain reaction (PCR); amplification of meningococcal DNA.
4. Fluid resuscitation; Antibiotics: to use third generation cephalosporins (Ceftriaxone or Cefotaxime), a class of betalactam antibiotics that are particularly potent against gram-negative bacteria and able to penetrate the CNS. Drug doses for septicemia and meningitis vary (1 g intravenously twice daily of Ceftriaxone for septicemia while anti-meningitic dose is 2 g intravenously twice daily). Penicillin is the drug of choice if third generation cephalosporins are unavailable, and chloramphenicol may be used in patients with a history of anaphylaxis to both cephalosporins and penicillin.
5. Vaccination, Chemoprophylaxis

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 4 | 2 | 1 | 3 | 4 |

**Тема/ Theme 23 «Инфекционные заболевания у детей: скарлатина, эпидемический паротит/Infectious Diseases in children: Group A Streptococcus infection, Mumps»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Стрептококковая инфекция группы А: этиология, эпидемиология, патогенез,

2. Клинические проявления, диагностика, осложнения стрептококковой инфекции.

3. Лечение, прогноз, профилактика стрептококковой инфекции.

4. Свинка: этиология, эпидемиология, патология, патогенез.

5. Клинические проявления, диагностика, осложнения паротита.

6. Лечение, прогноз, профилактика эпидемического паротита.

**Questions**

1. Group A Streptococcus infection: etiology, epidemiology, pathogenesis,
2. Clinical manifestations, diagnosis, complications of Streptococcus infection.
3. Treatment, prognosis, prevention of Streptococcus infection.
4. Mumps: etiology, epidemiology, pathology, pathogenesis.
5. Clinical manifestations, diagnosis, complications of Mumps.
6. Treatment, prognosis, prevention of Mumps.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with Streptococcus infection.
2. Make a plan investigation for a child with Mumps.

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 15-years-old boy was hospitalized in the Clinic of Infectious Diseases. He complained of fever about 38°C, painless swelling of the both parotid glands and dull abdominal pain.

A day before the hospitalization, headache, nausea, weakness and feeling of “stretching” and discomfort in the right testis occurred.

Epidemiological data about contact with mumps diagnosed patients during the last 20 days were positive.

In the conversation with the patient, he was sure that his immunization status was normal, without missing any of the recommended vaccines, including measles-mumps-rubella.

On the first contact with the patient, he was conscious and adequate, intoxicated and febrile to 39.2°C. A swelling of the both parotid glands was present, with soft – elastic consistence and moderate painfulness. Lymph nodes enlargement was not developed. The throat was mildly hyperemic, without coatings on the tonsils, and the tongue was dry and furred. Examination of the oral cavity, revealed ulcerated and red ducts of parotid glands. Auscultation of the lungs did not reveal any abnormalities. On examination of abdomen spontaneous epigastric pain increasing on palpation, physiologic peristalsis, and normal size of liver and lien were found. The right testis was swelled without redness of the scrotum. The central nervous system examination was normal.

**Investigations**

**CBC:** Hb-155 g/L, RBC-5,37x 1012/L, WBC -10,7х109/L, HCT-46%, PLT - 210 x109/L, NEUT-76.1%, EO-0,8%, LYMPH-14%, MONO-6,9%, BASO-0.6, ESR - 10 mm/hour.

Amylase in the sera – 979 ME

Amylase in the urine – 9284 ME

**Questions:**

1. What is your initial diagnosis? Assess the laboratory tests.
2. What is etiology factor causes this condition?
3. Which additional investigation should be carried out to confirm diagnosis?
4. What is the treatment regimen?
5. What is the prevention of the disease?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What are the microbiological characteristics of thegroup a streptococcus
2. Gram-negative, fastidious, encapsulated, oxidase-positive, anaerobic diplococcus
3. Gram-negative, fastidious, unencapsulated, oxidase-positive, aerobic diplococcus
4. Gram-positive coccoid-shaped bacteria that tend to grow in chains
5. Gram-negative coccoid-shaped bacteria that tend to grow in chains
6. What test is using for antibody determination of group a streptococcus infection
7. tests for anti-thrombin antibodies
8. tests for antibodies to epidermal transglutaminase
9. tests for anti-histone antibodies
10. tests for antibodies against streptolysin O (antistreptolysin O)
11. What is the incubation period for mumps
12. ranges from 10-12 days but is usually 5-7 days
13. ranges from 12-25 days but is usually 16-18 days
14. ranges from 21-25 days but is usually 18-20 days
15. ranges from 25-31 days but is usually 20-25 days
16. What changes in the cbc can be in mumps
17. leukopenia
18. leukocytosis
19. erythropenia
20. erythrocytosis
21. What is the vaccination schedule for mumps
22. at 3-6 mo of age for the 1st dose and 4-6 yr of age for the 2nd dose (as part of the MMR)
23. at 6-9 mo of age for the 1st dose and 4-6 yr of age for the 2nd dose (as part of the MMR)
24. at 9-12 mo of age for the 1st dose and 4-6 yr of age for the 2nd dose (as part of the MMR)
25. at 12-15 mo of age for the 1st dose and 4-6 yr of age for the 2nd dose (as part of the MMR)

**Образец решения задачи/** **An example of solving the task**

1. Mumps Orchitis and Pancreatitis .The changes in the laboratory analyzes were consistent to acute inflammatory process. Amylase in the sera was mildly elevated, while amylase in the urine was about 12 times the upper limit of normal.
2. Mumps is an acute infectious disease caused by mumps virus. Mumps or epidemic parotitis is an acute, vaccine-preventable, self-limiting, air–borne viral contagious disease, characterized by aseptic inflammation and swelling of one or more salivary glands, primarily affecting parotid glands
3. The diagnosis was confirmed by the serologic investigation which introduced high level of the specific class M anti mumps virus immunoglobulins, ultrasonography.
4. During the inpatient period (9 days) treatment by rehydration, methylprednisolone, vitamin C, antipyretics, analgesics and bed rest were implemented.
5. Immunization with the live mumps vaccine is the primary mode of prevention used in the United States. It is given as part of the MMR 2 dose vaccine schedule, at 12-15 mo of age for the 1st dose and 4-6 yr of age for the 2nd dose. If not given at 4-6 yr, the 2nd dose should be given before children enter puberty. Antibody develops in 94% (range: 89-97%) of vaccinees after 1 dose. Antibody levels achieved following vaccination are lower than following natural infection.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 3 | 4 | 2 | 1 | 4 |

**Тема/ Theme 24 «Инфекционные экзантемы у детей: корь, скарлатина, краснуха, ветряная оспа/Infectious Diseases in children. Measles. Rubella. Chickenpox (Varicella)»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Корь: этиология, эпидемиология, трансмиссия, патология, патогенез.

2. Клинические проявления кори.

3. Несобственная инфекция кори.

4. Лабораторные выводы.

5. Диагностика, осложнения, лечение, прогноз, профилактика кори. Краснуха: этиология, патогенез. Эпидемиология.

6. Клинические проявления, диагностика краснухи.

7. Осложнения, лечение, профилактика краснухи.

8. Ветряная оспа: этиология, патогенез. Эпидемиология.

9. Клинические проявления, диагностика ветряной оспы.

10. Осложнения, лечение, профилактика ветряной оспы.

**Questions**

1. Measles**:** etiology, epidemiology, transmission, pathology, pathogenesis.
2. Clinical manifestations of Measles.
3. Inapparent measles infection.
4. Laboratory findings.
5. Diagnosis, complications, treatment, prognosis, prevention of Measles. Rubella: etiology, pathogenesis. Epidemiology.
6. Clinical manifestations, diagnostics of Rubella.
7. Complications, treatment, prevention of Rubella.
8. Chickenpox: etiology, pathogenesis. Epidemiology.
9. Clinical manifestations, diagnostics of Chickenpox.
10. Complications, treatment, prevention of Chickenpox.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with Measles
2. Make a plan investigation for a child with Rubella
3. Make a plan investigation for a child with Chickenpox

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A seven-year-old girl was admitted to a hospital with an altered level of consciousness and inability to walk. She had fever and rash a week before admission. The rash started behind her ears and then spread all over her body. This was associated with conjunctivitis and a mild cough.

She continued to be highly febrile; two days before admission, she was unable to talk or move and appeared to be sleepy all the time. A history of a similar illness with fever and rash in her siblings since August was given. The child and her siblings were not vaccinated. They were living in an area with other families who also had individuals with a history of fever and rash around the same time. The parents were concerned that unlike her siblings and other children in the community, she was not improving but getting worse.

**On examination** her breathing, perfusion, blood pressure, and pulse rate were normal. She was noted to be aphasic and drowsy but easily aroused. She had supple neck and her facial nerves function was intact. She had normal muscles bulk with generalized hypotonia. She had generalized weakness but was able to move her upper limbs against gravity. There were some withdrawal movements of both lower limbs to deep pain stimuli. The deep tendon reflexes were exaggerated. She had bilateral extensor planter responses.

**Complete blood count** was without pathological changes.

**Questions:**

1. What is your initial diagnosis?
2. Which additional investigation should be carried out to confirm diagnosis?
3. What is the treatment regimen?
4. What is the prognosis of disease?
5. What is the tactic of managing the patient after discharge?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What is the etiology of measles
   1. virus is in the family Paramyxoviridae and the genus Pneumovirus
   2. virus is in the family Paramyxoviridae and the genus Ferlavirus
   3. virus is in the family Paramyxoviridae and genus Morbillivirus
   4. virus is in the family Paramyxoviridae and the genus Rubulavirus
2. What is the incubation period of rubella
3. 5-7 days
4. 7-10 days
5. 10-14 days
6. 14-21 days
7. What complication occurs more frequently among children and girls with rubella
8. thrombocytopenia
9. arthritis
10. encephalitis
11. progressive rubella panencephalitis
12. What is the infectious period with chickenpox
13. a day before and 20 days after the onset of symptoms
14. a day before and 15 days after the onset of symptoms
15. a day before and 10 days after the onset of symptoms
16. a day before and 5 days after the onset of symptoms
17. What stigmata can be observed in the congenital varicella syndrome
18. heart
19. skin
20. liver
21. spleen

**Образец решения задачи/** **An example of solving the task**

1. Acute Measles Encephalitis
2. Lumbar puncture and cerebrospinal fluid (CSF) examination for microscopy, biochemistry, culture, bacterial antigens, and viral study (measles, adenovirus, enterovirus, and herpes simplex virus), A computed tomography (CT) scan of her head, reactive serology and confirmed by viral RNA detection from the nasopharyngeal swab and the viral urine culture on Vero/SLAM cells.
3. On empirical treatment for meningoencephalitis with a 10-day course of acyclovir and ceftriaxone. She also received vitamin A (200,000 IU daily) for two days and high dose methylprednisolone (30 mg/kg/day) for five days
4. Good if the treatment is right.
5. rehabilitation program at the neurology clinic

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 3 | 4 | 1 | 4 | 2 |

**Тема/ Theme 25 «Кишечные инфекции у детей: сальмонеллёз, шигелез, колиинфекция. Острый гастроэнтерит у детей, терапия эксикоза/Infectious Diseases in children: Nontyphoidal Salmonellosis, Shigellosis, Escherichia Coli infection. Acute Gastroenteritis in сhildren, deficit therapy»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Нетифоидный сальмонеллез: этиология, эпидемиология, патогенез, клинические проявления, осложнения, диагностика, лечение, прогноз, профилактика.

2. Шигеллез: этиология, эпидемиология, патогенез, иммунитет, клинические проявления и осложнения, дифференциальная диагностика, диагностика, лечение, профилактика.

3. Инфекция Escherichia Coli (E. Coli): этиология, эпидемиология, патогенез, иммунитет, клинические проявления и осложнения, диагностика, лечение, профилактика.

4. Дефицитная терапия: клинические проявления, лабораторные данные. Расчет жидкости, дефицитный подход к тяжелой дегидратации, мониторинг и корректировка терапии.

5. Острый гастроэнтерит у детей: эпидемиология и этиология детской диареи, патогенез, факторы риска гастроэнтерита, клинические проявления, осложнения, диагностика, лечение, профилактика.

**Questions**

1. Nontyphoidal Salmonellosis: etiology, epidemiology, pathogenesis, clinical manifestations, complications, diagnosis, treatment, prognosis, prevention.
2. Shigellosis: etiology, epidemiology, pathogenesis, immunity, clinical manifestations and complications, differential diagnosis, diagnosis, treatment, prevention.
3. Escherichia Coli (E. Coli) infection: etiology, epidemiology, pathogenesis, immunity, clinical manifestations and complications, diagnosis, treatment, prevention.
4. Deficit Therapy: clinical manifestations, laboratory findings. Calculation of the fluid, deficit approach to severe dehydration, monitoring and adjusting therapy.
5. Acute gastroenteritis in children: epidemiology and etiology of childhood diarrhea, pathogenesis, risk factors for gastroenteritis, clinical manifestation, complications, diagnosis, treatment, prevention.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with Acute Gastroenteritis.

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A previously fit and healthy 14-year-old boy presented to the emergency department with a 1-day history of severe lumbar back pain radiating into the right buttock and lower limb, rendering him unable to walk. He also complained of fever and rigours, associated with a generalized headache and vomiting. The patient had been suffering with 7 days of bloody diarrhea, which had ceased 2 days prior to admission. There was no significant medical history or relevant risk factors for infection, such as travel and pets. He was not on any regular medication and did not report any allergies. There was no significant family history. The patient believed that he contracted the infection from a chicken burger he had consumed in a fast food restaurant, prior to his illness. His initial observations were as follows: pulse 92 beats/min, blood pressure 101/50 mm Hg, temperature 39.2°C, respiratory rate 22/min. Auscultation of the chest revealed fine bibasal crackles. Initial examination elicited severe pain in the right buttock on palpation. There were no rashes or signs of meningism. The remainder of his examination, including neurological examination, was unremarkable.

**Investigations**

**CBC:** Hb-119 g/L, RBC-5,37x 1012/L, WBC -27х109/L, HCT-46%, PLT - 90 x109/L, NEUT-76.1%, EO-0,8%, LYMPH-14%, MONO-6,9%, BASO-0.6, ESR - 10 mm/hour.

Alkaline phosphatase - 132 iu/l

Alanine transaminase - 58 iu/l

Total bilirubin - 54 umol/l

C reactive protein - 296 mg/l

Senteritidiswas found in his blood cultures.

**Questions:**

1. What is your initial diagnosis?
2. Assess the results of the initial observations and routine blood tests.
3. What additional investigations should be carried out to confirm diagnosis?
4. What is the treatment regimen?
5. What is the prognosis of disease?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What are the microbiological characteristics of the salmonellae
   1. motile, sporulating, nonencapsulated, Gramnegative rods that grow aerobically and are capable of facultative anaerobic growth
   2. motile, nonsporulating, nonencapsulated, Grampositive rods that grow aerobically and are capable of facultative anaerobic growth
   3. motile, nonsporulating, nonencapsulated, Gramnegative rods that grow aerobically and are capable of facultative anaerobic growth
   4. motile, nonsporulating, encapsulated, Gramnegative rods that grow aerobically and are capable of facultative anaerobic growth
2. In which part of the intestine do the most common pathological changes in shigellosis occur
3. colon
4. small intestine
5. jejunum
6. duodenum
7. What pathogen is the causative agent of watery diarrhea or a dysentery syndrome with blood, mucus, and leukocytes in the stools
8. enterohemorrhagic E. coli (EHEC)
9. enteropathogenic E. coli (EPEC)
10. enterotoxigenic E. coli (ETEC)
11. enteroinvasive E. coli (EIEC)
12. What are the clinical manifestations of severe dehydration
13. normal or increased pulse; decreased urine output; thirsty; normal physical findings
14. mild delay in elasticity (skin turgor); delayed capillary refill ( >1.5 sec); cool and pale
15. very sunken eyes and fontanel; no tears; parched mucous membranes; delayed elasticity (poor skin turgor); very delayed capillary refil ( >3 sec)

4. tachycardia; little or no urine output; irritable/lethargic; sunken eyes and fontanel

1. What is the replacement of losses with a minimum degree of dehydration for children with a body weight <10 kg
2. 10-60 mL ORS for each diarrheal stool or vomiting episode
3. 60-120 mL ORS for each diarrheal stool or vomiting episode
4. 120-140 mL ORS for each diarrheal stool or vomiting episode
5. 140-160 mL ORS for each diarrheal stool or vomiting episode

**Образец решения задачи/** **An example of solving the task**

1. Invasive non-typhoidal multifocal salmonella infection
2. Inflammation
3. MRI spine. MRI of the pelvis. An ultrasound of the right gluteus maximus. A chest x-ray.
   1. He was treated with intravenous ceftriaxone for 14 days. His acute respiratory damage was controlled by high-flow oxygen
4. Good if treatment will be right.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 3 | 4 | 1 | 4 | 2 |

**Модуль/Module 9 «Патология неонатального периода/Diseases in the Newborn period»**

**Тема/Theme 26 «Новорожденный, новорожденный высокого риска. Болезни периода новорожденности/The Newborn and the High-Risk infant. Diseases in the Newborn period»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Особенности адаптации недоношенных новорожденных.

2. Организация ухода и кормления недоношенных детей.

**Questions**

1. Features of adaptation of premature newborns.
2. Organization of nursing and feeding of premature infants.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Rate the newborn on the Apgare scores

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A newborn (girl) is a second baby born after a normal pregnancy of 39 weeks.

Heart rate: 78 per minute

Respiratory effort: irregular

Muscle tone: active motion

Response to catheter in nostril: grimace

Color: Body pink, extremities blue

**Questions:**

1. Assess the condition of the newborn immediately after birth using the Apgar score

2. What is the diagnosis?

3. What are your next steps?

4. What is the prognosis?

5. Does the newborn require prevention of hemorrhagic diseases? If so, how is it conducted?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What is the normal pulse of a healthy term newborn infant
2. 120-160 beats/min
3. 60-80 beats/min
4. 80-100 beats/min
5. 100-120 beats/min
6. What baby is called premature according to the world health organization
7. Liveborn infants delivered before 38 week from the 1st day of the last menstrual period
8. Liveborn infants delivered before 39 week from the 1st day of the last menstrual period
9. Liveborn infants delivered before 37 week from the 1st day of the last menstrual period
10. Liveborn infants delivered before 40 week from the 1st day of the last menstrual period
11. What baby is called low birthweight infant
12. Birthweight is 2500 g or less
13. Birthweight is 1000 g or less
14. Birthweight is 1500 g or less
15. Birthweight is 2000 g or less
16. In what gestational age is the highest risk of neonatal mortality in infants
17. <28 week
18. 37-38 week
19. 38-40 week
20. 40-41 week
21. What signs does the apgar score include
22. Blood pressure
23. oxygen saturation
24. Skin color
25. Axillary temperature

**Образец решения задачи/** **An example of solving the task**

1. 6 points

|  |  |
| --- | --- |
| Skin color | 1 |
| HR | 1 |
| RR | 1 |
| Muscle | 2 |
| Irritability | 1 |

1. Full-term newborn
2. If she gets a score of 4 to 6, she may need mouth and nose suctioning some oxygen to help her breathe. Assess the condition of the newborn at 5th minute after birth using the Apgar score. If the Apgar score on the fifth minute of life is 7 points or more, the Primary neonate care is performed, the baby is weighed and the length of the body is measured.
3. With properly provided health care, the forecast is favorable
4. An intramuscular injection of 0.5-1 mg of water-soluble vitamin K1 (phytonadione) should be given to all infants shortly after birth to prevent hemorrhagic disease of the newborn

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 3 | 1 | 4 | 3 | 2 |

**Тема/ Theme 27 «Оказание помощи новорожденному в родильном зале. Сердечно-легочная реанимация/ Assistance to the newborn in the delivery room. Cardiopulmonary resuscitation»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Респираторный дистресс и сбой.

2. Неспособность инициировать или поддерживать дыхание.

3. Реанимация новорожденных.

**Questions:**

1. Respiratory distress and failure.
2. Failure to initiate or sustain respiration.
3. Neonatal resuscitation.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan for resuscitation of the newborn with low Apgar score at 1 minute.

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

After a normal pregnancy, an infant is born by elective caesarian section under general anaesthesia. Immediately after delivery the infant is dried and placed under an overhead radiant warmer. He is not breathing and resuscitation is started. At 1 minute after birth the infant has a heart rate of 80 beats per minute, gives irregular gasps, has blue hands and feet but a pink tongue, has some muscle tone but does not respond when dried. Resuscitation is started and at 5 minutes the infant has a heart rate of 120 beats per minute and is breathing well. The tongue is pink but the hands and feet are still blue. The infant moves actively and cries well.

**Questions:**

1. What is the infant’s Apgar score at 1 minute?

2. Why does this infant require resuscitation?

3. What is the probable cause of the failure to breathe?

4. What is the most important step in resuscitating this infant?

5. What is this infant’s Apgar score at 5 minutes?

6. Why is this infant very unlikely to have suffered brain damage due to hypoxia?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Step «A» in neonatal resuscitation includes:
   1. maintain the circulation with chest compression and medications, if needed
   2. initiate breathing by using tactile stimulation or positive-pressure ventilation with a bag-and-mask or through an endotracheal tube
   3. anticipate and establish a patent airway by suctioning and, if necessary, performing endotracheal intubation
2. What administration may occur respiratory depression
   1. morphine
   2. ampicillin
   3. acidy folic
   4. oxygen
3. What are the symptoms of newborns at birth require resuscitation?
   1. limp
   2. anemia
   3. tachycardia
   4. tachypnea
4. If respiratory movements are made with the mouth closed but the infant fails to move air in and out of the lungs, should be suspected
   1. anemia
   2. shock
   3. obstruction of the lower respiratory tract
   4. obstruction of the upper respiratory tract
5. Primary apnea is a result of
   1. central nervous system failure
   2. neuromuscular disorders
   3. peripheral nervous system disorders
   4. obstruction of the upper respiratory tract

**Образец решения задачи/** **An example of solving the task**

1.The Apgar score at 1 minute is 4: heart rate=1, respiration=1, colour=1, tone=1, response=0.

2**.** Because he is not breathing well after being dried. The diagnosis of failure to breathe well is supported by the low Apgar score at 1 minute.

3. The general anaesthetic. Both the intravenous drugs and the anaesthetic gases cross the placenta and may sedate the fetus. These sedated infants usually respond rapidly to resuscitation.

4.If respiration cannot be stimulated by drying the infant, then ventilation must be started. Most infants can be adequately ventilated with a bag and mask. If good chest movement cannot be obtained with mask ventilation, the infant must be intubated and ventilated.

5.The Apgar score at 5 minutes is 9: heart rate=2, breathing=2, colour=1, tone=2, response=2. This indicates that the infant has responded well to resuscitation. Blue hands and feet (peripheral cyanosis) at 5 minutes are common.

6.Because there is no history of fetal distress to indicate that this infant had been hypoxic before delivery. The rapid response to resuscitation also suggests that there was not fetal hypoxia. There is also no good reason why the fetus should be hypoxic as the mother has had an elective caesarean section and was not in labour. Most fetal hypoxia occurs during labour.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| c | a | a | d | d |

**Тема/Theme 28 «Респираторный дистресс синдром yоворожденных/ Respiratory tract disorders of newborn»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Заболевания дыхательных путей новорожденных: этиология и патофизиология.

2. Клинические проявления расстройств дыхательных путей у новорожденных.

3. Диагностика заболеваний дыхательных путей новорожденного.

4. Осложнения дыхательных путей у новорожденных.

5. Лечение, профилактика заболеваний дыхательных путей новорожденных.

**Questions**

1. Respiratory tract disorders of newborn: etiology and pathophysiology.
2. Clinical manifestations of respiratory tract disorders of newborn.
3. Diagnosis of respiratory tract disorders of newborn.
4. Complications of respiratory tract disorders of newborn.
5. Treatment, prevention of respiratory tract disorders of newborn.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for newborn with respiratory tract disorders.

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A newborn (boy), from a 26-year-old mother, with a complicated anamnesis of somatic disease (diabetes), from first multiple pregnancy that occurred with the threat of interruption in the I and III-rd trimesters, first operative delivery by Caesarean section at 29 weeks due to vaginal bleeding. This child was the second of the twins. At birth: weight – 1,300 g, height – 37 cm, Apgar score 4/5 points. After 15 minutes of birth the appearance of tachypnea (RR 85 per min) was noted, intercostal and subcostal retractions during inspiration, barely noticeable nasal flaring while breathing, noticed cyanosis of nasolabial triangle, auscultation – decreased breath sounds. The child was transferred to the intensive care department. In the neurological status: expressed depression syndrome. The skin is clean, light pink. Auscultation of the lungs-breathing is weakened, crepitation wheezing. Muffled heart sounds, systolic noise over the area of the heart. Abdomen correct shape, soft, accessible to palpation, liver +1.5 cm, the spleen is not palpable. Urination independent, urine bright, diuresis = 2 ml/kg/hour. Blood gases: pH = 7.27, BE = –6.2 mmol/l, pCO2 = 70 mm Hg, pO2 = 35 mm Hg.

The X-ray of the chest: diffuse decrease transparency of lung fields, air bronchogram.

Express blood: WBC = 18x109/l.

**Questions:**

1. What are the infant’s clinical signs of disease?
2. What is your initial diagnosis?
3. What are the risk factors for the development of the disease can be noted in the anamnesis?
4. Assess the laboratory tests.
5. What pathogenic therapy should be carried out?
6. What is the antenatal prevention of this disease?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What is the primary cause of respiratory﻿ distress syndrome in newborn
   1. intranatal infection
   2. immaturity of the brainstem respiratory centers
   3. surfactant deficiency
   4. trauma
2. What investigation can help establish the respiratory﻿ distress syndrome in newborn
   1. blood culture
   2. neurosonography
   3. chest x-ray findings
   4. urinalysis
3. Risk factors for respiratory﻿ distress syndrome include
   1. asphyxia
   2. antenatal corticosteroid prophylaxis
   3. singleton pregnancy
   4. delivery at term
4. At what age do the first manifestations of respiratory distress syndrome appear
   1. 2 hours after birth
   2. 24 hours after birth
   3. 48 hours after birth
   4. within minutes of birth
5. What pathological condition of the newborn requires mechanical ventilation
   1. erythema
   2. respiratory failure
   3. jaundice
   4. rubella

**Образец решения задачи/** **An example of solving the task**

1. lungs-breathing is weakened, crepitation wheezing, muffled heart sounds, systolic noise over the area of the heart,
2. Respiratory distress syndrome
3. Premature infant from multiple pregnancy that occurred with the threat of interruption in the I and III-rd trimesters, operative delivery by Caesarean section at 29 weeks.
4. Blood gases: pH = 7.27, BE = –6.2 mmol/l, pCO2 = 70 mm Hg, pO2 = 35 mm Hg.
5. The X-ray of the chest: signs of Respiratory distress syndrome. WBC –normal
6. Glucocorticosteroids for the mother 24 hours before the delivery.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 3 | 3 | 1 | 4 | 2 |

**Тема/ Theme 29 «Желтухи новорожденных/Neonatal jaundice»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Неонатальная желтуха: причины, клинические проявления.

2. Диагностика желтухи новорожденных.

3. Осложнения желтухи новорожденных.

4. Лечение желтухи новорожденных.

**Questions**

1. Neonatal jaundice: causes, clinical manifestations.
2. Diagnosis of neonatal jaundice.
3. Complications of neonatal jaundice.
4. Treatment of neonatal jaundice.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a child with neonatal jaundice.

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A boy, on the first day of life, was born from a 23-year-old mother, with second Rh-negative blood group. The first pregnancy ended in miscarriage at 13 weeks. This second pregnancy proceeded with toxicosis during the first trimester, threat of termination during the second trimester and preeclampsia at the third trimester. She attended the antenatal clinic regularly during pregnancy, general investigation was conducted. Childbirth was urgent, independent. First period – 7 hours, the second – 30 minutes, anhydrous period – 5 hours.

**Examination:** birth weight – 2,990 g, length - 50 cm, Apgar score 6/8 points. Immediately at birth was noted icteric staining of the skin, membranes, amniotic fluid, and umbilical cord, expressed signs of CNS depression syndrome, hepatosplenomegaly (3 cm liver, spleen 1.5 cm).

**Investigations**

**Bilirubin** in cord blood was 190 mmol/l. **Hemoglobin level** 120 g/l.

**Questions:**

1. What are the infant’s clinical signs of disease?
2. What is your initial diagnosis?
3. Assess the laboratory tests.
4. What pathogenic therapy should be carried out?
5. What is the antenatal prevention of this disease?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. At what age is hyperbilirubinemia most common in newborns
2. during the 3st week after birth
3. during the 4st week after birth
4. during the 2st week after birth
5. during the 1st week after birth
6. At what age does the physiological jaundice of the full-term newborn appear
7. 1-2 days
8. 3-4 days
9. 2-3 days
10. 4-5 days
11. What is the cause of the hemolytic disease of the newborn
12. incompatibility of ABO factors
13. Gilbert syndrome
14. lack of carbohydrate
15. biliary atresia
16. What color is the skin of a newborn with jaundice from deposition of indirect bilirubin in the skin
17. greenish or muddy yellow cast
18. pallor or pink
19. bright yellow or orange
20. grayish brown
21. At what level of bilirubin does kernicterus in full-term newborn occur
22. >5 mg/dL
23. >10 mg/dL
24. >20 mg/dL
25. >15 mg/dL

**Образец решения задачи/** **An example of solving the task**

1. The skin, membranes, amniotic fluid, and umbilical cord are icteric, expressed signs of CNS depression syndrome, hepatosplenomegaly.
2. Hemolytic disease of the newborn due to the conflict by the Rh factor, icteric form, severe.
3. Bilirubin level is elevated, hemoglobin level is decrease.
4. Replacement single-group Rh-negative blood transfusion and phototherapy.
5. Intrauterine replacement blood transfusion.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 2 | 3 | 1 | 3 | 3 |

**Тема/ Theme 30 «Перинатальное поражение центральной нервной системы/Nervous System Disorders in Neonatal Infant»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Расстройства нервной системы у новорожденных: травматическое, эпидуральное, субдуральное и субарахноидальное кровоизлияния: причины, клинические проявления.

2. Травматическое эпидуральное, субдуральное или субарахноидальное кровоизлияние, внутричерепно-внутрижелудочковое кровоизлияние и перивентрикулярная лейкомаляция: причины, клинические проявления.

3. Диагностика. Осложнения. Лечение нарушений нервной системы у новорожденных.

4. Гипоксически-ишемическая травма головного мозга у новорожденных

**Questions**

1. Nervous System Disorders in Neonatal Infant: traumatic, epidural, subdural and subarachnoid hemorrhage: causes, clinical manifestations.
2. Traumatic epidural, subdural, or subarachnoid hemorrhage, intracranial-intraventricular hemorrhage and periventricular leukomalacia: causes, clinical manifestations.
3. Diagnosis. Complications. Treatment of Nervous System Disorders in Neonatal Infant.
4. Hypoxic-ischemic brain injury in newborns

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a plan investigation for a Neonatal Infant with Nervous System Disorders.

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 5 day-old boy transferred from the maternity hospital to the department of pathology because of continuous crying and sleep disorders. Anamnesis: from the 2nd pregnancy at 38 week. It was prenatal rupture of membranes. Duration of delivery was 25 hours, obstetrician forceps were used. Cried directly, Apgar score 7/8 points; weight - 3,500 g, length - 51 cm, head circumference - 35 cm.

**Examination:** the state was moderate, excitable. The skin was erythematous. Laterally on the head there were marks of forceps and swelling of tissues. In the left parietal bone was formation with palpable soft roller on the periphery within the bone. The anterior fontanel was 1.5x1.5 cm, not bulging. Neonatal reflexes were normal. In organs no pathology, RR 54 breathes/min, HR 154 beats/min.

Radiography of the skull: no traumatic injuries, cranial sutures are closed, tissue of left parietal area thickened.

**Questions:**

1. What pathological symptoms are in a newborn?
2. What is your initial diagnosis?
3. Assess the investigation.
4. What pathogenic therapy should be carried out?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What is the cause of the damage of central nervous system
   1. obesity
   2. asphyxia
   3. deafness
   4. hypermetropy
2. A diffuse, sometimes ecchymotic, edematous swelling of the soft tissues of the scalp involving the area presenting during vertex delivery is called
   1. subdural hematoma
   2. cerebral hernia
   3. caput succedaneum
   4. epidural hematoma
3. What you can see in cranial imaging in a grade i hemorrhage
   1. bleeding is isolated to the subependymal area
   2. bleeding within the ventricle but without evidence of ventricular dilation
   3. intraventricular and parenchymal hemorrhage
   4. hemorrhage consists of IVH with ventricular dilation
4. What investigation confirms hemorrhage
   1. craniography
   2. ECG
   3. MRI
   4. aEEG
5. Which nerves are injured in klumpke paralysis
   1. 1st and 2nd cervical nerves
   2. 3rd and 4th cervical nerves
   3. 7th and 8th cervical nerves
   4. 5th and 6th cervical nerves

**Образец решения задачи/** **An example of solving the task**

1. The baby is excitable, skin was erythematous, laterally on the head there were marks of forceps and swelling of tissues, in the left parietal bone was formation with palpable soft roller on the periphery within the bone
2. Perinatal damage of CNS. Hypoxic–ischemic encephalopathy: hyperexcitability syndrome, moderate, acute period. Traumatic ﻿Hemorrhage. Cephalohematoma of left parietal region.
3. Radiography of the skull without pathology.
4. Pathogenic therapy is not required.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 2 | 3 | 1 | 3 | 3 |

**Тема/ Theme 31 «Инфекционные заболевания новорожденных: неонатальный сепсис/ Infections of the Neonatal Infant: neonatal sepsis»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Инфекции новорожденных: сепсис новорожденных (синдром системного воспалительного ответа): причины, клинические проявления.

2. Диагностика сепсиса у новорожденных (синдром системного воспалительного ответа).

3. Осложнения сепсиса у новорожденных (синдром системного воспалительного ответа).

4. Лечение неонатального сепсиса (синдром системного воспалительного ответа).

5. Профилактика неонатального сепсиса (синдром системного воспалительного ответа).

**Questions**

1. Infections of the Neonatal Infant: neonatal sepsis (Systemic inflammatory Response syndrome): causes, clinical manifestations.
2. Diagnosis of neonatal sepsis (Systemic inflammatory Response syndrome).
3. Complications of neonatal sepsis (Systemic inflammatory Response syndrome).
4. Treatment of neonatal sepsis (Systemic inflammatory Response syndrome).
5. Prevention of neonatal sepsis (Systemic inflammatory Response syndrome).

**Задания для отработки практических умений/Tasks for practicing practical skills**

Make a plan investigation for a Neonatal Infant with Infections

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

Premature girl 3 days old, was born from 24 years old woman, from I pregnancy, occurring with the URI at 12-13 weeks, polyhydramnios. At 24 weeks - IgM CMV - pos., IgG CMV - pos. Birth at 35 weeks. Birth weight 2030 g, height 43 cm. Apgar score 5/6 points.

Inhibition of the unconditioned reflex activity, hypotonia. In the first days of life was noticed an episode of clonic convulsions. Icteric skin, multiple petechiae on the trunk and extremities. RR 46 breaths per min, no wheezing. Cardiac tones are rhythmic. HR 136 per min. Abdomen is soft, painless, liver + 4 cm, spleen +1.5 cm. Stool is light green, porridge-like. Enough urine, saturated color.

**Investigations**

**CBC:** HGB 130 g/L, RBC 4.1 x 10¹²/l, WBC 20x10 9 /l, NEUT-21%,, LYM 66%, EO 3%, MON 10%, PLT 120/l, ESR 4 mm/h.

**Blood biochemistry:** total protein 52 g/L (49-69), albumin 25 g/L (34-44), GGT 1200 U/L (up to 250), ALT 150 U/L (40), AST 110 U/L (up to 40), alkaline phosphatase 770 U/L (150), total bilirubin 150 umol/L (117-68), direct bilirubin 85 umol/L (4,3-12,8), glucose 4.1 mmol/L (1,7-4,7), urea 4.0 mmol /L (2.5-4.5), creatinine 70 mmol/L (35-110), potassium 5.0 mmol/L (4.5 - 6,5), Na 137 mmol/L (135-155), Ca ionized. 1.01 mmol/L (0,93-1,17), Mg 1,2 mmol/L (1.01-1,8).

**Questions:**

1. What are the main symptoms of congenital infection?
2. Assess the laboratory tests.
3. What is the cause of disease in this newborn?
4. What is your initial diagnosis?
5. Explain how to conduct therapy.

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. How many fetuses get infected in utero
2. 1%
3. 2%
4. 5%
5. 10%
6. Factors influencing which colonized infant will experience disease include
7. high birth weight
8. genetic predisposition
9. gestation is more than 37 weeks
10. rupture of membrane less than 12 hours
11. Concentrations immunoglobulin g in a full-term infant
12. higher than in premature infants
13. lower than in premature infants
14. comparable with premature infants
15. What agent those commonly cause healthcare-associated infections in the newborn
16. HIV
17. rubella
18. staphylococcus aureus
19. toxoplasmosis
20. Early-onset infections are acquired
21. after delivery until 1 month of life
22. onset after 1 month of life
23. before or during delivery
24. onset after 1 year of life

**Образец решения задачи/** **An example of solving the task**

1. Unconditioned reflex activity, muscles hypotonia, episode of clonic convulsions, Icteric skin, multiple petechial rash on the trunk and extremities,
2. Albumin level in the blood decrease; gamma glutamyltransferase (GGT), total bilirubin and direct bilirubin are elevated.
3. For 24 weeks of pregnancy, the mother suffered a cytomegalovirus infection.
4. Congenital cytomegalovirus infection. Depression syndrome, convulsions, jaundice. Hepatitis, hemorrhagic syndrome.
5. Phototherapy, antiviral therapy.

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 2 | 2 | 1 | 3 | 3 |

**Модуль 10** **«Дифференциальная диагностика заболеваний у детей/Differential diagnosis of diseases in children»**

**Тема/ Theme 32 «Дизурия, протеинурия, гематурия в дифференциальной диагностики заболеваний мочевыделительной системы/Dysuria, proteinuria, hematuria for the differential diagnosis of the urinary tract diseases in children»**

**Формы текущего контроля успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Дизурия: новорожденные, дети от 2 до 24 месяцев, дети дошкольного возраста, дети школьного и препубертатного возраста, подростки.

2. Протеинурия: нефротический синдром у детей раннего возраста, минимальные изменения заболевания, другие формы нефротического синдрома.

3. Протеинурия: нефротический синдром у детей младше 1 года, бессимптомные нарушения протеинурии.

4. Гематурия: грубая гематурия, микроскопическая гематурия, более распространенные причины гематурии.

**Questions**

1. Dysuria: neonates, children 2-24 months of age, preschool children, school-aged/prepubertal children, adolescents.
2. Proteinuria: nephrotic syndrome in young children, minimal change disease, other forms of nephrotic syndrome.
3. Proteinuria: nephrotic syndrome in infants younger than 1 year, asymptomatic proteinuria disorders.
4. Hematuria: gross hematuria microscopic hematuria more common causes of hematuria.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a diagnostic algorithm for patients with Dysuria

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

**Brief history**

She fell ill 4 days ago, after a long bath in the cool sea. This problem appeared for the first time. Birth history and past medical history are unremarkable. Family history is non-contributory. There has been no recent travel.

**Questions:**

1. What is your initial diagnosis?

**On examination**

Temperature – 37.9 ºC, BP-100/50 mm Hg, HR- 100/min, RR - 28-30 per minute. Skin is pale. Mucous membrane is pink, peripheral lymph nodes were not enlarged, painless on palpation. In lungs vesicular breathing, no wheezing. Heart sounds loud rhythmic. Abdomen was soft. Liver and spleen were not palpable. Renal fist percussion (Pasternatsky's symptom) is positive of the back, pain in lower area of abdomen intensifying in motion.

**Laboratory investigation**

**CBC:** HGB-120 g/L, RBC-4.5x1012/L, WBC-18 ×109/L, NEUT-57.9%, EO-1%, LYMPH-35%, MONO-6%, BASO-0.1, ESR-26 mm/h.

**Urine analysis** – specific gravity – 1018, protein – 0,04 g/L, RBC – 1–3 of visual field, WBC – 10-20 of visual area.

**Abdominal ultrasound:** Increased size of both kidneys with swelling of the parenchyma.

**Questions:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Painful urination and can be related to uncomfortable contraction of the muscles of the bladder or when urine comes into contact with the inflamed genitourinary mucosa is defined as
2. pyuria
3. proteinuria
4. hematuria
5. dysuria
6. Risk factor for urinary tract infection in infant females includes
7. fever for at least 6 hours
8. fever for at least 12 hours
9. temperature >39°C
10. temperature >38°C
11. Cause of transient proteinuria is
12. dehydration
13. lupus nephritis
14. galactosemia
15. amyloidosis
16. A renal biopsy may be considered in a patient older than 8 or 9 years with asymptomatic proteinuria if urinary protein excretion is
17. greater than 5 mg/kg/day
18. greater than 6 mg/kg/day
19. greater than 7 mg/kg/day
20. greater than 8 mg/kg/day
21. What is glomerular primary cause of gross hematuria in children
22. pyelonephritis
23. IgA nephropathy
24. urethritis
25. Wilms tumor

**Образец решения задачи/** **An example of solving the task**

1. Urinary tract infection
2. CBC: leukocytosis, left shift, ESR increase, UA – proteinuria, erythrocyturia, leukocytyria; US: inflammation of the kidneys
3. Bilateral pyelonephritis
4. Glomerulonephritis, cystitis
5. Antibiotics 7 days

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 4 | 3 | 1 | 4 | 2 |

**Тема/ Theme 33 «Сыпь дифференциальная диагностика у детей/Rash for the differential diagnosis of skin diseases in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Сыпь: анамнез, осмотр, специфические поражения кожи, другие результаты физического осмотра, диагностические исследования, лабораторные анализы, диагностика и принятие решений.

2. крапивница.

3. Мультиформная эритема.

4. Синдром Стивенса – Джонсона / токсический эпидермальный некролизный комплекс.

5. Аллергический контактный дерматит.

**Questions:**

1. Rash: history, examination, specific skin lesions, other physical examination findings, diagnostic studies, laboratory tests, diagnosis and decision making.
2. Urticaria.
3. Erythema Multiforme .
4. Stevens–Johnson Syndrome/Toxic Epidermal Necrolysis Complex .
5. Allergic Contact Dermatitis.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a diagnostic algorithm for patients with a rash

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 2 year old boy with complaints on itchy, dry skin with excoriations since 1 ½ years.

**Brief history**

The child was born through normal vaginal delivery was apparently normal till 6th month of age. Later it was noticed that erythematous lesions first appeared on cheeks and in due course of time lesions got spread over body gradually in symmetrical fashion with intense itching, dryness and excoriation. Child had disturbed sleep due to intense itching at night. The present deterioration arose after the use of orange juice.

**Questions:**

1. What is your initial diagnosis?
2. What questions would you like to ask the mother of the child?
3. What additional investigation is needed?

**On examination**

Integumentary system

Scalp – dry flakes of skin present. Erythematous lesions with scales and excoriations were present over face. Crusts and lichenification along with serous exudates in some lesions of the lower limb was observed which were irregular in shape and distributed in symmetrical fashion. The lesions were more pronounced over face, flexor and extensor aspect of limbs and back with pruritus and xerosis.

**Laboratory investigation**

His eosinophil count was 500/ml (8.4% of WBC).

The Ig E level was 3500IU (normal range at the age 5-10 years – up 60 IU)

**Questions:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. An eruption on the mucous membranes that occurs in the context of generalized disease is called
2. сrust
3. enanthem
4. pustule
5. exanthema
6. What is the most common complication of atopic dermatitis?
7. secondary infection
8. scabies
9. psoriasis
10. eczema herpeticum
11. Treatment of pruritus consists of elimination of identifiable causes and
12. administration of proton pump inhibitors
13. administration of antihistamines
14. administration of antacids
15. administration of antibiotics
16. The typical lesion in erythema multiforme is characterized by
17. pink-to-red crusted plaques
18. pustules
19. an erythematous papule with a dusky, purpuric, or necrotic center
20. transient, edematous, erythematous, often annular wheals
21. What are the most common causes of Stevens–Johnson syndrome in children?
22. diuretics
23. antihistamines
24. steroids
25. sulfonamides

**Образец решения задачи/** **An example of solving the task**

1. Atopic dermatitis
2. Is there any allergic diseases in the family?

What products does the child eat?

Was there such a disease before? If yes, what was treated?

1. Physical examination, laboratory investigation
2. Increase eosinophil count, Ig E level
3. Atopic dermatitis
4. Allergic contact dermatitis, scabies
5. Treatment for atopic dermatitis

**Hypoallergenic diet**

Emollients: Ointments > creams > lotions

**Antihistamines.**

**Steroid creams.**

Topical calcineurin inhibitors (Tacrolimus: For moderate to severe atopic dermatitis, Pimecrolimus: For mild to moderate atopic dermatitis).

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 2 | 1 | 2 | 3 | 4 |

**Тема/ Theme 34 «Дифференциальная диагностика гипербилирубинемии у детей и подростков Differential diagnosis of hyperbilirubinemia in children and adolescents»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Желтуха у новорожденных и младенцев.

2. Желтуха у ребенка и подростка.

**Questions:**

1. Jaundice in the neonate and infant.
2. Jaundice in the child and adolescent.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a diagnostic algorithm for patients with hyperbilirubinemia

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

Child in age of 10 days, with icteric skin.

**Brief history**

The baby was born in a term with weight 3000g. Apgar score is 8-9 points. From the first day an icterus of skin admitted, liver +3,5cm, spleen is on the edge of costal arc. Color of urine and feces are not changed. In this time Combs test is positive, hemoglobin 130 g/l, reticulocytes is 4,6%, common bilirubin is 300 mcmol/l, indirect fraction is - 288 mcmol/l, transaminases: ALT - 0,28, AST - 0,26. During medical treatment, the state of child became better, intensity of icterus diminished.

**Questions:**

1. What is your initial diagnosis?

**On examination for 9 days of life**

Temperature - 36.2ºC, HR- 160/min, RR - 46 per minute. Skin is greenish color. Mucous membrane is icteric, peripheral lymph nodes were no palpable. In lungs puerile respiration, wheezes are not present. Cardiac tones are loud, rhythmic. Abdomen was soft. Liver +3.5cm, spleen is on the edge of costal arc. Color of urine is dark, feces white.

**Investigation**

In ultrasound cholic channels and gall-bladder scanned clear, liver the increased liver size, increased echogenicity is increased.

**Questions:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Physiologic jaundice generally resolves by
2. 1-2 hours of age
3. 1-2 days of age
4. 1-2 weeks of age
5. 1-2 months of age
6. The disorder when maternal antibodies (immunoglobulin G) to the infant’s erythrocytes cross the placenta, resulting in red blood cell destruction is called
7. isoimmune hemolytic disease
8. erythrocyte membrane defects
9. Kernicterus
10. Polycythemia
11. What is ocular manifestation of Alagille syndrome
12. microcolon
13. butterfly vertebrae
14. tetralogy of fallot
15. microcornea
16. The toxin leads to conjugated hyperbilirubinemia in childhood and adolescence is
17. alcohol
18. phosphorus
19. chlorpromazine
20. acetaminophen
21. At what disease unconjugated hyperbilirubinemia is due to increased bilirubin production in childhood and adolescence
22. Gilbert syndrome
23. Crigler-Najjar syndrome type II
24. Hemoglobinopathy
25. Prolonged fasting

**Образец решения задачи/** **An example of solving the task**

1. Jaundice
2. liver the increased liver size, increased echogenicity is increased
3. Intrahepatic cholestasis
4. Hemolytic disease of newborn, congenital hepatitis

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 3 | 1 | 4 | 2 | 3 |

**Тема/ Theme 35 «Острая боль в животе, диарея, рвота - дифференциальная диагностика заболеваний желудочно-кишечного тракта у детей/Acute abdominal pain, diarrhea and vomiting for the differential diagnosis of digestive system diseases in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Острая боль в животе: анамнез, физикальное обследование, лабораторная оценка, визуализация, лечение, специфические причины острой боли в животе.

2. Хроническая боль в животе: постановка диагноза: функциональная боль в животе, тяжесть и локализация боли, подход к лечению.

3. Диарея: острая диарея, хроническая диарея, хроническая неспецифическая диарея.

4. Рвота: определение, нейроанатомия рвоты, данные для постановки диагноза.

**Questions**

1. Acute abdominal pain: history, physical examination, laboratory evaluation, imaging evaluation, management, specific causes of acute abdominal pain.
2. Chronic abdominal pain: making a diagnosis of functional abdominal pain, severity and location of pain, approach to treatment.
3. Diarrhea: acute diarrhea, chronic diarrhea, chronic nonspecific diarrhea.
4. Vomiting: definition, neuroanatomy of vomiting, data to guide the diagnosis.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a diagnostic algorithm for patients with Abdominal pain

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A four-year-old boy presented with vomiting three times per day, watery diarrhea, abdominal pain and a temperature up to 40°C.

Brief history: his mother describes stools as liquid and foul smelling, with no mucous, slime or blood. The child had recently traveled to Mexico. He was taking non-bottled water in Mexico. No other family members were ill.

**Questions:**

1. What is your initial diagnosis?
2. What questions would you like to ask the mother of the child?
3. What additional investigation is needed?

On physical examination

The patient's temperature was 39.7°C (103.6°F), his respiratory rate was 30 and his pulse rate was 130. The patient had a blood pressure measurement of 80/60 mm Hg.

He was alert but irritable, with a dry mouth and no tearing. His skin turgor and capillary refilling were normal.

Bowel sounds were increased, and the abdominal examination was otherwise normal.

**Laboratory and instrumental investigation**

RBC 4,4\*1012/l, Hemoglobin 123 g/l, Platelets 196\*109/l, WBC 16,7\*109/l, Neutrophils 12,5\*109/l;

C-reactive protein 24 mg/l;

Stool culture: Enterotoxigenic *E.coli ;*

An abdominal ultrasound was reported as normal.

**Questions:**

1. Assess investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What is the cause of acute abdominal pain in neonate?
2. obstruction
3. trauma
4. sickle cell crisis
5. pancreatitis
6. What is the cause of sudden acute excruciating abdominal pain (within minutes)?
7. abdominal epilepsy
8. acute rheumatic fever
9. cholelithiasis
10. Addison disease
11. Diarrhea in toddlers is defined as a stool volume of greater than
12. 5 g/kg/day
13. 10 g/kg/day
14. 15 g/kg/day
15. 20 g/kg/day
16. Diarrhea characterized by increased secretion of fluid into the gastrointestinal lumen beyond the capacity to be reabsorbed is called
17. osmotic diarrhea
18. inflammatory diarrhea
19. functional diarrhea
20. secretory diarrhea
21. A form of gastroesophageal reflux and, as such, is caused predominantly by lower esophageal sphincter dysfunction is called
22. belch
23. regurgitation
24. rumination
25. retching

**Образец решения задачи/** **An example of solving the task**

1. Acute gastroenteritis
2. What did the child eat?

Was the child sick like this before?

1. CBC, stool culture, serum glucose, electrolytes, an abdominal ultrasound
2. Laboratory findings included leukocytosis with elevated neutrophils and an elevated C-reactive protein level.
3. Acute gastroenteritis due to Enterotoxigenic *E.coli*
4. Infection due to Enteropathogenic *E. coli* (EPEC), Rotaviruses, Noroviruses, *Giardia intestinalis, Cryptosporidium parvum/hominis, Strongyloides stercoralis.*
5. Oral rehydration therapy (ORT): WHO solution, Hydra-Lyte, Rehydralyte, Pedialyte, Generic pediatric solution, Lytren, Resol, Infalyte, Ricelyte; Antipyretics

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 1 | 3 | 2 | 4 | 2 |

**Тема/ Theme 36 «Недостаточность дыхания и кашель - дифференциальная диагностика заболеваний органов дыхания у детей Respiratory distress and cough in children for the differential diagnosis of the respiratory diseases»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Кашель: патофизиология, анамнез, физикальное обследование, диагностические исследования, дифференциальная диагностика и лечение.

2. Респираторный дистресс: диагностический подход, анамнез, физикальное обследование, лабораторные исследования, визуализация, причины респираторного дистресса.

**Questions**

1. Cough: pathophysiology, history, physical examination, diagnostic studies, differential diagnosis and treatment.
2. Respiratory distress: diagnostic approach, history, physical examination, laboratory tests, imaging, causes of respiratory distress.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a diagnostic algorithm for cough patients

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 13 years old girl with complaints of dry cough, dyspnea.

**Brief history**

She fell ill 2 days ago when there was a dry cough, shortness of breath after a walk. The girl from a physiological pregnancy. Early development was normal. With 10 years girl suffers from seasonal allergic rhinitis (pollen allergy), the last exacerbation 2 weeks ago.

**Questions:**

1. What is your initial diagnosis?

**Examination**

Her skin is pale and clear; peripheral lymph nodes are not enlargement, palpation painless, mobile, solitary, dense and elastic in consistency; mucosa of the mouth and throat are pale pink, clear, tonsil - slightly hyperemic. In the lungs, weak breathing, mixed moist and crepitation rales on both sides, mainly in the lower regions of the lungs. RR - 60 per min. Heart sounds are loud, rhythmic, tachycardia of 110 per minute. The abdomen was soft, palpation painless, Liver and spleen were not palpable. Urination is free. Meningeal symptoms are absent.

**Laboratory investigation**

**CBC**: RBC-4,2x1012/L, HGB-126 g/L, WBC-12x109/L, NEUT-53%, MONO-2%, LYMPH-38%, EOS – 7%, PLT-250x109/L, ESR-6 mm/h.

**Chest X-ray:** hyperinflation, more at the top of the both lungs

**IgE** – 400ME

**SaO2** – 92%

**Spirometry:** FVC – 70%, FEV1 - 72%, bronchodilator response -15%

**Questions:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. Supplemental humidified oxygen should be administered to any child who has significant wheezing, accessory muscle use, or an oxygen saturation of
   1. <93%
   2. <94%
   3. <95%
   4. <96%
2. An acute cough is defined as a cough lasting less than
   1. 4 weeks
   2. 5 weeks
   3. 6 weeks
   4. 7 weeks
3. One of the most common causes of recurrent cough in children is
   1. an acute virial infection
   2. a cystic fibrosis
   3. an acute bacterial infection
   4. a headache
4. One of the most common causes of chronic cough in combination with expiratory obstruction in children is
   1. an acute virial infection
   2. a pertussis
   3. an acute bacterial infection
   4. an asthma
5. One of the most common causes of respiratory distress in full-term neonate is
   1. a pertussis
   2. an asthma
   3. a meconium aspiration
   4. a tuberculosis

**Образец решения задачи/** **An example of solving the task**

1. Bronchial asthma
2. CBC: normally, Chest X-ray: hyperinflation; IgE –increase; SaO2 –low; spirometry – bronchospasm.
3. Bronchial asthma, exacerbations
4. Pneumonia, tuberculosis
5. Oxygenation, Broncholitic therapy, ICS

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 1 | 1 | 2 | 4 | 3 |

**Тема/ Theme 37 «Боль в груди, шум в сердце - дифференциальная диагностика заболеваний сердца у детей/Chest pain, murmurs for the differential diagnosis of the heart diseases in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Боль в груди: причины боли в груди, подход к пациенту с болью в груди.

2. Шумы: детская сердечно-сосудистая оценка, симптомы и признаки сердечно-сосудистых заболеваний, сердечно-сосудистая оценка, классификация сердечных шумов, физикальное обследование.

**Questions**

1. Chest pain: causes of chest pain, approach to the patient with chest pain.
2. Murmurs: pediatric cardiovascular evaluation, symptoms and signs of heart disease, cardiovascular assessment, classification of cardiac murmurs, physical examination.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a diagnostic algorithm for patients with Chest pain

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 4-year-old boy, with complaints of chest pain.

**Brief history**

The chest pain lasting one week during physical exertion (running, outdoor games).

From history, we know that a month ago the child has a fever lasting 10 days, a rash, conjunctivitis, 2 weeks after that desquamation of the skin on the hands and feet.

**Questions:**

1. What is your initial diagnosis?

**Examination**

Temperature – 36.6 ºC, BP-80/45 mm Hg, HR- 112/min, RR - 24 per minute. Skin is clear, moderately moist. The mucous membrane of the mouth is pink. Peripheral lymph nodes were not enlarged, painless on palpation. In lungs vesicular breathing, no wheezing. Heart sounds are clear, rhythmic. Abdomen was soft, painless in lower area of abdomen. Liver and spleen were not palpable. Renal fist percussion (Pasternatsky's symptom) is negative on the both side of the back. Urination, stool is normal.

**Laboratory investigation**

**CBC**: RBC-4,1x1012/L, HGB-120 g/L, WBC-8,5x109/L, NEUT- 45%, MONO-6%, LYMPH-47%, EOS- 2%, PLT-650x109/L, ESR-5 mm/h.

**ECG:** moderate sinus arrhythmia with HR 110-130, ST-T changes in the standards and left chest leads.

**Echocardiogram:** cardiac cavities are normal, narrowing of the lumen of the right coronary artery, the thickness of intima-media arteries is increased.

**Questions.**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. What is the more likely etiology of chest pain in children younger than 12 years of age?
   1. cardiorespiratory
   2. musculoskeletal
   3. psychogenic
   4. neurological
2. What situation (Red Flag) increases the likelihood of a cardiac cause of chest pain in children?
   1. low blood pressure
   2. fever
   3. burp
   4. coughing
3. What is the cause of chest pain when it is associated with dysrhythmias, pallor, cold extremities?
   1. gastrointestinal
   2. cardiovascular
   3. respiratory
   4. neurologic
   5. musculoskeletal
4. Grade V murmurs of Intensity and loudness is
   1. easily heard, of intermediate intensity
   2. easily heard and associated with a thrill (a palpable vibration on the chest wall)
   3. very loud, with a thrill present, and audible with only the edge of the stethoscope on the chest wall
   4. audible with the stethoscope off the chest wall
5. The murmurs start abruptly with S1 but taper and disappear before the S2 and are exclusively associated with small muscular VSDs is
   1. early systolic murmurs
   2. mid-systolic to late-systolic
   3. holosystolic
   4. ejection systolic

**Образец решения задачи/** **An example of solving the task**

1. Cardiac diseases
2. CBC: thrombocytosis; ECG: arrhythmia, nonspecific ST-T changes; Echo CG: right coronaryitis.
3. Kawasaki disease
4. Cordites, hypertension

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 1 | 1 | 2 | 3 | 3 |

**Тема/ Theme 38 «Лихорадка - дифференциальная диагностика инфекционных заболеваний у детей/Fever for the differential diagnosis of infectious diseases in children»**

**Формы текущего контроля** **успеваемости/Forms of current performance monitoring:**

тестирование/ testing

устный опрос/ investigation

решение проблемно-ситуационных задач/solving problem situational problems

**Оценочные материалы текущего контроля успеваемости/** **Assessment materials of current performance monitoring**

**Вопросы для подготовки к устному опросу:**

1. Лихорадка: патофизиология лихорадки, лихорадка без источника.

2. Лихорадка: анамнез, физикальное обследование, дифференциальный диагноз, роль диагностического тестирования у пациентов с лихорадкой без источника, оценка и ведение.

3. Инфекции центральной нервной системы.

4. Лихорадка неизвестного происхождения.

**Questions**

1. Fever: pathophysiology of fever, fever without source.
2. Fever: history, physical examination, differential diagnosis, role of diagnostic testing in patients with fever without source, evaluation and management.
3. Central nervous system infections.
4. Fever of unknown origin.

**Задания для отработки практических умений/Tasks for practicing practical skills**

1. Make a diagnostic algorithm for patients with Fever

**Типовые практические задания для проверки умений/** **Typical practical tasks for testing skills:**

A 16-year-old teenager with complaints of high fever (400C), dyspnea, non-productive cough.

**Brief history**

He fell ill 2 weeks ago, had a cough, fever, treated with Amoxiclav 7 days, then Sumamed 5 days and expectorants. Shortness of breath, cough worsened.

The boy from a physiological pregnancy. Early development was normal. At 11 years had an auto accident, was treated for a long time in the hospital, repeated transfusions. At the age of 14 years, was treated in the hospital with a diagnosis of Mononucleosis. After discharge from the hospital, lymph nodes, liver and spleen remained swollen. Frequent respiratory diseases. From 15 years, periodically perioral herpes. Over the past year, the child became irritable, aggressive, decreased memory and performance in school.

**Questions:**

1. What is your initial diagnosis?

**On examination**

He had a pale, clear skin; multiple palpable lymph nodes of the neck, axillary, inguinal, ranging in size from 0.7 to 1.3 cm, painless, mobile, solitary, dense and elastic in consistency; mucosa of the mouth and throat are pale pink, clear, tonsil - slightly hyperemic. In the lungs, weak breathing, mixed moist and crepitation rales on both sides, mainly in the lower regions of the lungs. RR - 60 per min. Heart sounds are loud, rhythmic, tachycardia of 110 per minute. The abdomen was soft, palpation painless, the liver protrudes 2 cm below the costal margin, the spleen was not palpable. Meningeal and focal symptoms absent.

**Laboratory investigation**

**CBC**: RBC - 3,2x1012/L, HGB - 96 g/L, WBC - 17x109/L, NEUT - 83%, MONO - 2%, LYMPH - 8%, EOS – 7%, PLT - 250x109/L, ESR - 36 mm/h.

**Chest X-ray:** increased transparency of lung fields, a net-like enhanced pulmonary pattern, multiple small patchy shadows with "snow storm" appearance, enlargement of hilar lymph nodes.

**Questions:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?

**Типовые тестовые задания для проверки знаний/** **Typical test tasks for testing knowledge:**

1. How much fluid must be increased with each temperature increase of 1 ° C above 37.8 ° C in children?
   1. 50 mL/m2/day
   2. 70 mL/m2/day
   3. 100 mL/m2/day
   4. 200 mL/m2/day
2. What is used to screen for bacterial infection?
   1. C-reactive protein, procalcitonin and urine dipstick (the lab score)
   2. WBC and urine dipstick (the lab score)
   3. complete blood count and urine dipstick (the lab score)
   4. blood culture
3. What disease helps to identify chest radiographs
   1. sepsis
   2. urinary tract infections
   3. pneumonia
   4. meningitis
4. Risk factor UTI for girls is
   1. temperature greater than 39°C
   2. age >12 months
   3. temperature  lower than 39°C
   4. fever  for over 24 hours
5. The sign, when the patient's flexion of the neck causes spontaneous flexion of the legs on the hips and knees, is called
   1. Brudzinski
   2. Aldrich
   3. Budd-Chiari
   4. Kernig

**Образец решения задачи/** **An example of solving the task**

1. Infection diseases
2. CBC: leukocytosis, left shift, ESR increase, Chest X-ray: enlargement of hilar lymph nodes.
3. HIV
4. Different infection

**Эталоны ответов тестовых заданий/** **Test answers**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** |
| 3 | 1 | 3 | 1 | 1 |

**Критерии оценивания, применяемые при текущем контроле успеваемости, в том числе при контроле самостоятельной работы обучающихся.**

|  |  |
| --- | --- |
| **Форма контроля** | **Критерии оценивания** |
| **глоссарий** | Оценка «ОТЛИЧНО» выставляется при условии 90-100% правильных терминов |
| Оценка «ХОРОШО» выставляется при условии 75-89% правильных терминов |
| Оценка «УДОВЛЕТВОРИТЕЛЬНО» выставляется при условии 60-74% правильных терминов |
| Оценка «НЕУДОВЛЕТВОРИТЕЛЬНО» выставляется при условии 59% и меньше правильных терминов |
| **таблицы** | Оценка «ОТЛИЧНО» выставляется при условии 90-100% правильных ответов |
| Оценка «ХОРОШО» выставляется при условии 75-89% правильных ответов |
| Оценка «УДОВЛЕТВОРИТЕЛЬНО» выставляется при условии 60-74% правильных ответов |
| Оценка «НЕУДОВЛЕТВОРИТЕЛЬНО» выставляется при условии 59% и меньше правильных ответов. |
| **тестирование** | Оценка «ОТЛИЧНО» выставляется при условии 90-100% правильных ответов |
| Оценка «ХОРОШО» выставляется при условии 75-89% правильных ответов |
| Оценка «УДОВЛЕТВОРИТЕЛЬНО» выставляется при условии 60-74% правильных ответов |
| Оценка «НЕУДОВЛЕТВОРИТЕЛЬНО» выставляется при условии 59% и меньше правильных ответов. |
| **устный опрос** | Оценкой "ОТЛИЧНО" оценивается ответ, который показывает прочные знания основных вопросов изучаемого материала, отличается глубиной и полнотой раскрытия темы; владение терминологическим аппаратом; умение объяснять сущность явлений, процессов, событий, делать выводы и обобщения, давать аргументированные ответы, приводить примеры; свободное владение монологической речью, логичность и последовательность ответа. |
| Оценкой "ХОРОШО" оценивается ответ, обнаруживающий прочные знания основных вопросов изучаемого материла, отличается глубиной и полнотой раскрытия темы; владение терминологическим аппаратом; умение объяснять сущность явлений, процессов, событий, делать выводы и обобщения, давать аргументированные ответы, приводить примеры; свободное владение монологической речью, логичность и последовательность ответа. Однако допускается одна - две неточности в ответе. |
| Оценкой "УДОВЛЕТВОРИТЕЛЬНО" оценивается ответ, свидетельствующий в основном о знании изучаемого материала, отличающийся недостаточной глубиной и полнотой раскрытия темы; знанием основных вопросов теории; слабо сформированными навыками анализа явлений, процессов, недостаточным умением давать аргументированные ответы и приводить примеры; недостаточно свободным владением монологической речью, логичностью и последовательностью ответа. Допускается несколько ошибок в содержании ответа. |
| Оценкой "НЕУДОВЛЕТВОРИТЕЛЬНО" оценивается ответ, обнаруживающий незнание изучаемого материла, отличающийся неглубоким раскрытием темы; незнанием основных вопросов теории, несформированными навыками анализа явлений, процессов; неумением давать аргументированные ответы, слабым владением монологической речью, отсутствием логичности и последовательности. Допускаются серьезные ошибки в содержании ответа. |
| **решение ситуационных задач** | Оценка «ОТЛИЧНО» выставляется если обучающимся дан правильный ответ на вопрос задачи. Объяснение хода ее решения подробное, последовательное, грамотное, с теоретическими обоснованиями (в т.ч. из лекционного курса), с необходимым схематическими изображениями и демонстрациями практических умений, с правильным и свободным владением терминологией; ответы на дополнительные вопросы верные, четкие. |
| Оценка «ХОРОШО» выставляется если обучающимся дан правильный ответ на вопрос задачи. Объяснение хода ее решения подробное, но недостаточно логичное, с единичными ошибками в деталях, некоторыми затруднениями в теоретическом обосновании (в т.ч. из лекционного материала), в схематических изображениях и демонстрациях практических действий, ответы на дополнительные вопросы верные, но недостаточно четкие. |
| Оценка «УДОВЛЕТВОРИТЕЛЬНО» выставляется если обучающимся дан правильный ответ на вопрос задачи. Объяснение хода ее решения недостаточно полное, непоследовательное, с ошибками, слабым теоретическим обоснованием (в т.ч. лекционным материалом), со значительными затруднениями и ошибками в схематических изображениях и демонстрацией практических умений, ответы на дополнительные вопросы недостаточно четкие, с ошибками в деталях. |
| Оценка «НЕУДОВЛЕТВОРИТЕЛЬНО» выставляется если обучающимся дан правильный ответ на вопрос задачи. Объяснение хода ее решения дано неполное, непоследовательное, с грубыми ошибками, без теоретического обоснования (в т.ч. лекционным материалом), без умения схематических изображений и демонстраций практических умений или с большим количеством ошибок, ответы на дополнительные вопросы неправильные или отсутствуют. |

1. **Оценочные материалы промежуточной аттестации обучающихся.**

Промежуточная аттестация по дисциплине в форме экзамена для студентов 5 курса проводится по экзаменационным билетам и результатам предэкзаменационного тестирования и в форме зачета для студентов 6 курса по зачетным билетам.

**Критерии, применяемые для оценивания обучающихся на промежуточной аттестации**

*Расчет дисциплинарного рейтинга осуществляется следующим образом:*

*промежуточной аттестации по дисциплине для 5 курса – экзамен:*

*Рд=Рт+Рб+Рэ*

*если форма промежуточной аттестации по дисциплине для 6 курса – зачет:*

*Рд=Рт+Рб+Рз, где*

***Рб -*** *бонусный рейтинг;*

***Рд -*** *дисциплинарные рейтинг;*

***Рз -*** *зачетный рейтинг;*

***Рт -*** *текущий рейтинг;*

***Рэ -*** *экзаменационный рейтинг*

Критерии, для оценивания обучающихся на промежуточной аттестации для определения зачетного/экзаменационного рейтинга.

**11-15 баллов.** Ответы на поставленные вопросы излагаются логично, последовательно и не требуют дополнительных пояснений. Полно раскрываются причинно-следственные связи между явлениями и событиями. Делаются обоснованные выводы. Демонстрируются глубокие знания базовых нормативно-правовых актов. Соблюдаются нормы литературной речи. (Тест: количество правильных ответов> 90 %).

**6-10 баллов.** Ответы на поставленные вопросы излагаются систематизировано и последовательно. Базовые нормативно-правовые акты используются, но в недостаточном объеме. Материал излагается уверенно. Раскрыты причинно-следственные связи между явлениями и событиями. Демонстрируется умение анализировать материал, однако не все выводы носят аргументированный и доказательный характер. Соблюдаются нормы литературной речи. (Тест: количество правильных ответов> 70 %).

**3-5 баллов.** Допускаются нарушения в последовательности изложения. Имеются упоминания об отдельных базовых нормативно-правовых актах. Неполно раскрываются причинно-следственные связи между явлениями и событиями. Демонстрируются поверхностные знания вопроса, с трудом решаются конкретные задачи. Имеются затруднения с выводами. Допускаются нарушения норм литературной речи. (Тест: количество правильных ответов >50 %).

**0-2 балла.** Материал излагается непоследовательно, сбивчиво, не представляет определенной системы знаний по дисциплине. Не раскрываются причинно-следственные связи между явлениями и событиями. Не проводится анализ. Выводы отсутствуют. Ответы на дополнительные вопросы отсутствуют. Имеются заметные нарушения норм литературной речи. (Тест: количество правильных ответов <50 %).

**Вопросы для проверки теоретических знаний по дисциплине «Педиатрии» для 5 курса**

1. The growth of the children and its evaluation, childhood periods.
2. The development of the nervous system in children and its evaluation.
3. The development of the nervous system in children, physiological and pathological reflexes in children.
4. Feeding infants, general principles of breastfeeding.
5. Feeding infants, hypogalactia, types of formula. Artificial and mixed feeding, definition, general principles feeding.
6. Malnutrition of suckling and infant etiology, clinical manifestation, dietetic and drug treatment, prevention.
7. Malnutrition of suckling and infant – the principles of dietary therapy, prevention, evaluation.
8. Protein malnutrition (Kwashiorcor), definition, etiology, pathogenesis, clinical manifestation, dietary and treatment, prevention.
9. Energy deficiency malnutrition (Marasmus), etiology, pathogenesis, clinical manifestation, dietary and treatment, prevention.
10. Celiac disease, definition, etiology, clinical manifestation, diagnosis and differential diagnosis, treatment, evolution, prevention.
11. Cystic fibrosis in children, etiology, pathogenesis, clinical manifestations in pulmonary form, diagnosis and differential diagnosis, treatment, prognosis.
12. Cystic fibrosis in children, definition, pathogenesis, clinical manifestations in intestinal form, diagnosis, differential diagnosis, treatment, prognosis.
13. Rickets - definition, etiology, pathogenesis. Vitamin D metabolism in the child’s organism and its role. Calcium and phosphorus metabolism. The action of vitamin D metabolites on the «target» organs.
14. Rickets - classification, clinical manifestation, diagnosis and differential diagnosis.
15. Rickets - definition, etiology, pathogenesis. The treatment of vitamin D-dependent rickets in children. The vitamin D-dependent rickets prevention, prevention.
16. Spasmophylia: definition, pathogenesis, clinical manifestations, diagnosis and differential diagnosis, treatment and prevention.
17. Vitamin D hypervitaminosis. Etiology, pathogenesis, classification, clinical manifestations, diagnosis and differential diagnosis, treatment, prevention.
18. Deficiency anemia in children. Iron deficient anemia in suckling and infant, etiology, pathogenesis, metabolism of iron in organism.
19. Iron deficiency anemia in children, clinical picture, diagnosis, differential diagnosis.
20. Iron deficiency anemia in children, definition, etiology, pathogenesis. The treatment and prevention of deficiency anemia in children.
21. Acute lymphoblastic leukemia in children: definition, etiology, pathogenesis, diagnosis, differential diagnosis, treatment.
22. Hemorrhagic vasculitis in children, definition, classification, etiology, pathogenesis, diagnosis and differential diagnosis, prognosis, follow-up.
23. Henoch-Schönlein purpura in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
24. Kawasaki disease in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
25. Idiopathic thrombocytopenic purpura in children, etiology, pathogenesis, clinical picture, diagnosis and differential diagnosis, treatment, prognosis.
26. Coagulopathies in children: Hemophilia, pathogenesis, clinical picture, complications, diagnosis and differential diagnosis, programs of treatment.
27. Von Willebrand disease in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
28. Thrombocytopenic purpura in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
29. Acute rheumatic fever in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
30. Acute rheumatic fever in children, clinical and evolution peculiarities in children, positive and differential diagnosis.
31. The treatment of rheumatic fever in children, primary and secondary prevention, prognosis, follow-up.
32. Infection endocarditis in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
33. Myocarditis in children, etiology, pathogenesis, clinical manifestation, criteria of diagnosis, differential diagnosis, treatment, complications, prognosis, follow-up.
34. Congenital heart diseases in children, etiology, pathogenesis, classification.
35. Congenital heart diseases in children, definition, clinical manifestations, diagnosis.
36. Congenital heart diseases in children with left-right shunt, hemodynamics, clinical picture, diagnosis and differential diagnosis, principles of treatment.
37. Congenital heart diseases in children with right-left shunt, hemodynamics, clinical picture, diagnosis and differential diagnosis, principles of treatment.
38. Tetralogy of Fallot, hemodynamics, clinical picture, diagnosis, complications, principles of treatment, prognosis.
39. Atrial septal defect, classification, hemodynamics, clinical manifestation, diagnosis, treatment, long time follow-up.
40. Ventricular septal defect, classification, hemodynamics, clinical manifestation, diagnosis, treatment, long time follow-up.
41. Coarctation of the aorta and aortic stenosis in children, classification, classification, hemodynamics, clinical manifestation, diagnosis, complications, principles of conservative treatment, long time follow-up.
42. Peptic ulcer disease in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
43. Gastric ulcer in children, classification, etiology, pathogenesis, clinical manifestation, diagnosis, complications, principles of treatment, prognosis, follow-up.
44. Duodenal ulcer in children classification, etiology, pathogenesis, clinical manifestation, diagnosis, complications, principles of treatment, prognosis.
45. Pyelonephritis in children, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
46. Glomerulonephritis in children, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
47. Acute﻿ poststreptococcal﻿ glomerulonephritis in children, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
48. Phenylketonuria in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
49. Down's disease in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
50. Galactosemia in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
51. Cystic fibrosis in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
52. Congenital hypothyroidism, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
53. Meningococcal disease in children, definition, epidemiology, pathogenesis, pathophysiology, clinical manifestations, diagnosis, treatment, complications, prognosis, prevention.
54. Diphtheria in children, definition, epidemiology, pathogenesis, pathophysiology, clinical manifestations, diagnosis, treatment, complications, prognosis, prevention.
55. Group A Streptococcus infection: epidemiology, pathogenesis, pathophysiology, clinical manifestations, diagnosis, treatment, complications, prognosis, prevention.
56. Mumps in children, definition, epidemiology, pathogenesis, pathophysiology, clinical manifestations, diagnosis, treatment, complications, prognosis, prevention.
57. Measles in children, definition, epidemiology, pathogenesis, pathophysiology, clinical manifestations, diagnosis, treatment, complications, prognosis, prevention.
58. Rubella in children, definition, epidemiology, pathogenesis, pathophysiology, clinical manifestations, diagnosis, treatment, complications, prognosis, prevention.
59. Chickenpox in children, definition, epidemiology, pathogenesis, pathophysiology, clinical manifestations, diagnosis, treatment, complications, prognosis, prevention.
60. Nontyphoidal Salmonellosis in children, definition, epidemiology, pathogenesis, pathophysiology, clinical manifestations, diagnosis, treatment, complications, prognosis, prevention.
61. Shigellosis in children, definition, epidemiology, pathogenesis, pathophysiology, clinical manifestations, diagnosis, treatment, complications, prognosis, prevention.
62. Escherichia Coli infection in children, definition, epidemiology, pathogenesis, pathophysiology, clinical manifestations, diagnosis, treatment, complications, prognosis, prevention.
63. Deficit Therapy for intestinal infection in children: clinical manifestations, laboratory findings. Calculation of the fluid, deficit approach to severe dehydration, monitoring and adjusting therapy.
64. Acute gastroenteritis in children: epidemiology and etiology of childhood diarrhea, pathogenesis, risk factors for gastroenteritis, clinical manifestation, complications, diagnosis, treatment, prevention.
65. Bronchitis in children, etiology, pathogenesis, classification. Acute bronchitis, clinical manifestation, diagnosis and differential diagnosis, treatment, prevention.
66. Obstructive bronchitis in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis and differential diagnosis, treatment.
67. Bronchiolitis in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.
68. Pneumonia in children: definition, etiology, pathogenesis, predisposing factors, classification, diagnosis.
69. Community-acquired pneumonia in children, definition, etiology, pathogenesis, diagnosis, clinical manifestation in infants, treatment, specific prevention.
70. Bronchopneumonia in children, definition, etiology, pathogenesis, clinical manifestation, diagnosis, differential diagnosis.
71. Clinical manifestation, radiological findings, atypical forms of pneumonias in children (mycoplasmal, pneumocystis, streptococcal), differential diagnosis, treatment.
72. Pulmonary and extrapulmonary complications of pneumonias in children, diagnosis and differential diagnosis, principles of symptomatic treatment, prevention.
73. Symptomatic treatment and antibacterial therapy of pneumonias in children, general and specific prevention of pneumonias in children.
74. Bronchial asthma in children, definition, predisposing factors, classification, etiologic, pathogenesis peculiarities of bronchial asthma in children.
75. Bronchial asthma in children, clinical manifestations, criteria of bronchial asthma severity appreciation.
76. Bronchial asthma in children: diagnosis and differential diagnosis.
77. The treatment of bronchial asthma in children. The treatment of exacerbation.
78. Anti-inflammatory treatment in steps of bronchial asthma in children, prevention, follow-up.
79. Diabetes mellitus in children: classification, etiology, pathogenesis, symptoms, diagnosis, treatment.
80. Type ﻿1﻿ diabetes﻿ mellitus in children, definition, etiology, pathogenesis, symptoms, diagnosis, treatment, complications, diabetic ketoacidosis, monitoring.
81. Type﻿ 2﻿ diabetes﻿ mellitus in children, definition, etiology, pathogenesis, symptoms, diagnosis, treatment, complications, diabetic ketoacidosis, monitoring.
82. Disorders of the thyroid gland in children: hypothyroidism: etiology, pathogenesis, symptoms, diagnosis, treatment, prevention.
83. Goiter in children, definition, etiology, pathogenesis, symptoms, diagnosis, differential diagnosis.
84. Endemic goiter in children, definition, etiology, pathogenesis, symptoms, diagnosis, differential diagnosis, prevention.
85. Hyperthyroidism in children, definition, etiology, pathogenesis, symptoms, diagnosis, treatment, prevention.
86. Hyperthyroidism in children, definition, etiology, pathogenesis, symptoms, diagnosis, treatment, prevention.
87. Hypothyroidism in children, definition, classification, etiology, pathogenesis, symptoms, diagnosis, treatment, prevention.
88. Congenital hypothyroidism in children, definition, classification, etiology, pathogenesis primary hypothyroidism, symptoms, diagnosis, treatment.
89. Congenital hypothyroidism in children, definition, classification, etiology, pathogenesis central hypothyroidism, symptoms, diagnosis, treatment.
90. Chronic lymphocytic thyroiditis in children, definition, etiology, pathogenesis, symptoms, diagnosis, treatment, prevention.
91. Chronic lymphocytic thyroiditis (Hashimoto thyroiditis) in children, definition, etiology, pathogenesis, symptoms, diagnosis, treatment, prevention.
92. Features of adaptation of premature newborns. Organization of nursing and feeding of premature infants.
93. The newborn and the high-risk infant - definition. Physical examination of newborns in the delivery room, Apgar score.
94. The newborn and the high-risk infant - definition. Physical examination of newborns in the delivery room,assessment of gestational age at birth.
95. Diseases in the newborn period: physical examination of newborns in the delivery room, detection of abnormalities of newborns.
96. Respiratory tract disorders of newborn: etiology and pathophysiology, clinical manifestations, diagnosis, complications, treatment, prevention.
97. Neonatal jaundice: causes, clinical manifestations, diagnosis, complications, treatment.
98. Traumatic nervous system disorders in neonatal infant: causes, clinical manifestations, diagnosis, complications, treatment.
99. Hypoxic-ischemic brain injury in newborns: causes, clinical manifestations, diagnosis, complications, treatment.
100. Infections of the neonatal infant (neonatal sepsis): causes, clinical manifestations, diagnosis, complications, treatment, prevention.

**Практические задания для проверки сформированных умений и навыков**

**CASE 1**

**Examination ticket №1**

**PATIENT** is a child 6 years old.

**ANAMNESIS:** the early anamnesis is normal. In preventive examinations revealed increased blood pressure to 120/60 mm Hg. The family history - is not burdened. The history of the disease - acute respiratory infections are rare, grown and developed in accordance with age. On exertion - from time to time abdominal pain.

**EXAMINATION:** RR - 24 breaths per minute, HR - 106 beats per minute (on activity RR - 30 per minute, HR - 120 per minute). The disproportionate figure - well-developed shoulders and upper limbs, reduced the development of lower limbs. Complaints of fatigue in the legs when walking. Normal skin color. BP on hands = 120/60 and 123/36 mm Hg, BP on the legs = 100/70 mm Hg. The femoral pulse is barely detectable. In the lungs, vesicular breathing, wheezing not listen. The area of the heart is not changed, palpation- enhanced apical impulse, relative cardiac dullness extended to the left border. Heart sounds loud, rhythmic, noise is not listening. Auscultation is rough systolic murmur in the interscapular region on the back. Shortness of breath, tachyc,ardia are absent. The liver is not increased.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 2**

**PATIENT** is a child of 10 years

**ANAMNESIS:** 2 weeks ago suffered from influenza. Yesterday, there was a rash on his feet. The history of the family - is not burdened. The history of the disease - acute respiratory infections are rare, grown and developed in accordance with age. The girl got sick for the first time.

**EXAMINATION:** T -36,60C, RR - 24 breaths per minute, HR - 106 beats per minute, BP - 90/60 mm Hg. Skin pale and bruises of various shapes, sizes and colors. Her oral mucosa is moist, the gums are pink, pure. In lungs are vesicular breathing, no wheezing, heart sounds are loud rhythmic. An abdomen is soft, painless at palpation.

**INVESTIGATION:**

**CBC:** Hb-122 g/L, RBC-4,3x 1012/L, WBC -15х109/L, HCT-26%, PLT - 90 x109/L, ESR - 10 mm/hour.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 3**

**PATIENT:** boy is a 6 years old, from a wound which appeared after extraction of tooth, the strong bleeding began. The history of the disease: boy after a significant injury has extensive bruising and prolonged bleeding.

**EXAMINATION:** T -36.60C, RR - 24 breaths per minute, HR - 100 beats per minute, BP - 90/60 mm Hg. Skin pale and extensive bruising on the legs. Her oral mucosa is moist. The wound is bleeding after tooth extraction. In lungs vesicular breathing, no wheezing, heart sounds loud rhythmic. An abdomen is soft, painless at palpation.

**INVESTIGATION:**

**CBC:** Hb-89 g/L, RBC-3,3x1012/L, WBC -11х109/L, HCT-26%, PLT - 650 x109/L, ESR - 15 mm/hour.

F-VIII - 6%, F-IX 70%.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 4**

**PATIENT is** a 5-year-old boy admitted to the emergency department with a pain in his right ankle. His ankle is red, hot and obviously swollen. His mother says that he refuses to bear weight on this leg. In addition, she notes that he complained of pain in his left knee the previous day, had an upper respiratory infection the week before. The history of the disease and the history of the family - is not burdened.

**EXAMINATION:** T -380C, HR -100 per min, RR -20 per min, BP- 110 / 70 mm. He looks sick, feverish and irritable. The exam is a positive for mild sore throat. In lungs vesicular breathing, no wheezing, heart sounds loud rhythmic. Abdomen: liver size normal, painless during palpation. It is marked swelling, erythema, pain, and movement to-limit-of-motion of the right ankle. His skin test is positive for petechial slightly raised rash on the legs, the most visible on his ankles, back of the thighs and buttocks.

**INVESTIGATION:**

**CBC:** Hb-112 g/L, RBC-4,3x 1012/L, WBC -15х109/L, HCT-26%, PLT - 750 x109/L, ESR - 30 mm/hour.

**Urine analysis:** cloudy, amber; specific gravity - 1019, RBC – 0-1 of visual field, WBC – 0-1 of visual field, protein - negative.

**Blood and urine cultures** - negative.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 5**

**PATIENT** is a 2-year-old girl, the parents turned to the doctor with a fever, enlarged lymph nodes and rash. 6 days ago acutely ill with fever, rash and irritability. Ibuprofen was given to low the temperature. The day before the onset of fever appeared red, raised, "spotted" without pruritus rash. The rash began her ankle (both) and progressing proximally to the hips, and completely resolved within three days. Her arms and legs looked more red than usual. Within four days, the fever has remained in the range of 38-390C. Two days ago, her lips looked red, cracked and swollen, and her eyes with conjuctival injection with limbal sparing. Erythema of the oral and pharengeal mucosa with strawberry tongue.

**INVESTIGATION**

**CBC:** Hb-122 g/L, RBC-4,8x 1012/L, PLT - 850 x109/L, WBC -25х109/L, NEUT-67.9%, EO-1%, LYMPH-25%, MONO-6%, BASO-0.1, ESR - 50 mm/hour.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 6**

**PATIENT** is a 5-year-old boy with sweating, weakness, weight loss. Patient is ill during 3 months.

**EXAMINATION**: T - 37.10C, HR – 104 beats per minute, RR – 24 breaths per minute.

In a patient it is revealed enlargement of jugular and axillary lymphatic nodes, size - 6,0х7,0 sm., consistence – softly-elastic, a liver comes forward from under a costal arc on 5 sm., spleen - on 8 sm., at palpation – sensible.

**INVESTIGATION**

**CBC:** HGB -112 g/L, WBC-18x109/L, PLT-220,0x109/L, ESR-20 mm/h, NEUT-9%, MONO -2%, LYMPH -89%. The laboratory reports that blasts sells are not detected.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 7**

**PATIENT** is a 12 years old. He complained of pain, which appeared in the bones of the feet, fatigue, malaise. The history of the family - is not burdened. The history of the disease - acute respiratory infections are rarely sick, grown and developed in accordance with age.

**EXAMINATION:** T - 37.30C, RR - 22 per minute, HR - 90 per minute. Skin pale and bruising on the legs. In the lungs, vesicular breathing, wheezing not listen. The area of the heart is not changed. Heart sounds are loud, rhythmic, noise is not listening, general increase of lymphonodes, hepatolienal syndrome.

**CBC**: RBC-3,0x1012/L, HGB-80 g/L, WBC-18x109/L, NEUT-76%, MONO-1%, LYMPH-3%, PLT-50x109/L, ESR-65 mm/h. The laboratory reports that 20% blasts sells are detected.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 8**

A 7-year-old girl complains of frequent painful urination, abdominal pain, fever 38.3ºC. She fell ill 4 days ago.

On examination: T – 38.2 ºC, BP-100/50 mm Hg, HR- 90 beats/minute, RR - 18 - breaths/minute. Skin is pale, with no rash; mucous is pink. In lungs vesicular breathing, no wheezing, heart sounds loud rhythmic. Pasternatsky symptom is positive (right side), back pain.

**CBC:** HGB-120 g/L, RBC-4.5x1012/L, WBC-18×109/L, NEUT-57.9%, EO-1%, LYMPH-35%, MONO-6%, BASO-0.1, ESR-26 mm/h.

**Urine analysis** – specific gravity – 1018, protein – abs., RBC – 1–3 of visual field, WBC – 20-30 of visual area.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 9**

**PATIENT** is a 6 month old female infant, born full term with birth weight 2.7 kg and was exclusively breast fed till 6 months of age, presented with complaint of blackish knuckle pigmentation of fingers and toes. Mother is strictly vegan.

**EXAMINATION:** she was found to be pale, with a weight 5900 gm (50-th percentile) and other anthropometric measures were within normal limits. Organomegaly not revealed. Neurodevelopmental assessment is appropriate for age.

**INVESTIGATION:**

**CBC:** HGB-88 g/L, RBC-2.8x1012/L, PLT-300 ×109/L, WBC-8 ×109/L, NEUT-40.9%, EO-1%, LYMPH-52%, MONO-6%, BASO-0.1, MCV -105µM3, MCH - 22pg, MCHC - 34%, Reticulocyte count - 0,5%, ESR-16 mm/h. **Peripheral smear**: macrocytosis, ovalocytes, anisocytosis, poikilocytosis and hypersegmented neutrophils.

Serum Vit. B12 - 106 pg/ml (200-800 pg/ml)

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 10**

**PATIENT** is a 22 month old boy with a complaint of pallor.

**ANAMNESIS:** he is a picky eater, taking only small amounts of chicken and some vegetables, but loves milk and drinks six to eight bottles of whole milk daily; approximately 1.1 to 1.4 liters per day. Family history reveals a mother had anemia during her pregnancy.

**EXAMINATION:** he is an active children, with no fatigue, increase in sleeping or exercise food intolerance. T - 37.5ºC, BP - 90/52 mmHg, HR - 145 beats/minute, RR - 28 breaths/minute, height - 85.5 cm (50th percentile), weight - 13.2 kg (75th percentile). He is a pale appearing, active toddler, holding a bottle, tearing and eating paper from your exam table. Eyes: no scleral icterus, conjunctiva is pale. Mouth: present dental caries. Heart rate is regular without murmurs. Her abdomen is flat, soft, non-tender, without hepatosplenomegaly. Stool is dark brown, soft, negative for occult blood.

**INVESTIGATION:**

**CBC:** HGB - 78 g/L, HCT-19.8%, MCV- 54 fL, RDW -21%. RET- 1.8%. **Peripheral smear**: microcytosis, hypochromia, mild anisocytosis, and polychromasia.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 11**

**PATIENT** is a girl 1 year old with abdominal distension and diarrhea. During the last 2 weeks the child had recurrent colicky abdominal pain, that always stopped spontaneously after several hours.

**ON CLINICAL EXAMINATION** during which the patient felt well, there was distended abdomen with increased intestinal peristalsis without other pathologic signs. Growth and weight were on the 10th percentile. Body weight is 5.8 kg, height - 65 cm.

**INVESTIGATIONS:**

Endomysium-immunoglobulin (IgA) and IgG-antigliadin-antibodies were elevated. Other parameters were normal.

During ultrasound performed while the patient was in abdominal pain, general thickening of the intestinal wall with high echogenicity was seen as well as increased intestinal peristalsis and multiple presumably ileo-ileal intussusceptions. These intussusceptions were seen for several days and reduced spontaneously.

Biopsy of the mucosa of the small intestine showed villous atrophy and diminished disaccharidases.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 12**

**PATIENT** is a 4-month-old male infant

**ANAMNESIS:** was normally delivered at full term (40 weeks of gestational age) as a first son with birth weight 3.2 kg. The Apgar score 8/9 points. He had been receiving breast-feeding exclusively. His family has no history of known inherited disease.

**EXAMINATION**: on admission the child was hypoactive with poor sucking, body weight 4,2 kg. The sclera and skin were icteric. Lenticular opacity (cataract) and hepatomegaly were noted. Other system examinations were normal.

**INVESTIGATIONS:** alanine aminotransferase - 194 IU/L (N: 0-41); aspartate aminotransferase - 224 IU/L (N: 0-41); conjugated bilirubin - 2.8 mg/dL; galactose - 514.2 mg/dL (N<10.00 mg/dL); galactose-1-phosphate uridyl transferase - 0.86 U/g Hb (N>5.00).

Urinary sugar chromatography showed (++) galactosuria.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 13**

**PATIENT** is a 9-year-old boy, complained abdominal pain hunger, vomiting, loss of appetite.

**ANAMNESIS:** revealed frequents respiratory infections treated with antibiotics and symptomatic drugs, including administration of antipyretics until the age of six. Family history showed that both his parents and maternal grandmother had Helicobacter pylori infection and maternal grandfather had perforated gastric ulcer surgically treated. The boy presented mild diffuse abdominal pain started from approximately one month prior. Two days before, after psychological stress (sport competition), the pain became severe and the boy started to vomit (alimentary and bilious).

**EXAMINATION**: at admission revealed a well-developed and well-nourished boy, with grade I obesity (W - 50 kg, H - 130 cm, BMI – 30 kg/m2). Vital signs were normal. Epigastric and umbilical pain without muscular defense, positive bowel sounds and no hepatosplenomegaly was noted.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 14**

**PATIENT** is a female patient, aged 17 years

**ANAMNESIS:** was admitted to hospital with intense epigastric pain, vomiting and nausea. The patient had complained of epigastric pain for three years, after suffering a stress. Last 2 weeks the pain becomes severe. The family history offered no relevant data. The patient did not consume drugs, alcohol and did not smoke.

**EXAMINATION**: at admission revealed skin is normal color; epigastric and umbilical pain without muscular defence, positive bowel sounds. No hepatosplenomegaly was noted. Vital signs were normal.

**INVESTIGATIONS:**

**CBC:** HGB-128 g/L, RBC-4.38x1012/L, HCT- 34.4%, PLT-320 ×109/L, WBC - 10 ×109/L, NEUT-50.9%, EO-1%, LYMPH-32%, MONO-6%, BASO-0.1, ESR-6 mm/h.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 15**

**PATIENT** is a girl 8 months old, complained of severe tonic convulsions.

**ANAMNESIS:** the girl was born from first pregnancy which occurred with hypotension, anemia, and cramps in the calf muscles. Delivery in term, birth weight 3800, length 53 cm, from birth on cow's milk feeding. Complementary food from the fourth month. Currently gets porridge, vegetable purees, yogurt.

**EXAMINATION**: the girl of high power, hydrocephalic head shape, expressed frontal and occipital protuberance. Craniotabes. Fontanelle 2x2 cm, the edges malleable. Keeled form chest, the lower aperture deployed. Tissue turgor drastically reduced. Calf muscles are strain, "obstetrician’s hand" symptom. HR - 150 beats per minute. In the lungs bubbling rale. RR – 40 breaths per minute. Revealed abdominal enlargement and muscle hypotonia. Liver + 3 cm. Can sit only with support, can’t stand, periodically tonic convulsions.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 16**

**PATIENT** is a 14-year-old male presented to the emergency room with complaint of high grade fever for two days and rash over the extremities, headache and photophobia for the past one day.

**EXAMINATION**: the rash was widespread covering all four limbs, purpuric and associated with ecchymosis. There was clinical evidence of nuchal rigidity.

**INVESTIGATIONS:**

**CBC:** HGB-120 g/L, RBC-4.5x1012/L, PLT-120 ×109/L, WBC-21 ×109/L, NEUT-80.9%, EO-1%, LYMPH-12%, MONO-6%, BASO-0.1, ESR-36 mm/h.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 17**

**PATIENT** is a 4-year 9-month old boy

**ANAMNESIS:** was admitted with a history of noisy breathing of two days duration and severe breathlessness on the day of admission. His fever was said to be mild.

**EXAMINATION**: on admission, he was drowsy but was still able to obey simple commands. Central cyanosis was present. RR - 50 per minute with presence of intercostal and subcostal recession. His perfusion was normal. The provisional diagnosis was acute epiglottitis. Laryngoscopic examination under general anaesthesia done three hours after admission revealed white plagues over both tonsils and an inflammed pharyngeal wall. The epiglottis, supraglottis and vocal cords were normal.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 18**

**PATIENT** is a 12-day-old infant. The mother presented to the emergency department with complaint of fever, irritability, rash, poor feeding, moaning and crying which appeared for the last 2 hours. She described the rash as localized to the abdomen, with variably sized pink to dark pink spots.

**ANAMNESIS:** his 11-year-old brother had nasopharingitis for 1 month’s duration.

**EXAMINATION**: the infant had temperature of 390C, and the rash had spread to his extremities, with petechial lesions in the groin that were purplish to black in color. He looked visibly ill, appearing ashen and sleepy with some grunting. There was clinical evidence of nuchal rigidity. Meningeal signs are positive.

**INVESTIGATIONS:**

**CBC:** HGB-120 g/L, RBC-4.5x1012/L, WBC-28 ×109/L, NEUT-57.9%, EO-1%, LYMPH-35%, MONO-6%, BASO-0.1, ESR-26 mm/h.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 19**

**PATIENT** is a 6-year 9-month old boy was admitted with breathlessness, cough and poor oral intake.

**ANAMNESIS:** He had noisy breathing and poor oral intake one day prior to admission.

He has no vaccination history against diphtheria.

**EXAMINATION**: he was in respiratory distress with intercostal and subcostal recession. Air-entry on both lungs was diminished, but rales not listen. RR - 46 breaths per minute. HR - 160 beats per minute He had normal perfusion. White membrane was present in posterior pharyngeal wall with no membrane over the enlarged tonsils.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 20**

**PATIENT** is a 6-year-old girl with complaint of fever and breathlessness for three days.

**ANAMNESIS:** she had hoarseness of voice for two days and poor oral intake. She has no vaccination history against diphtheria.

**EXAMINATION**: she was in severe respiratory distress, pale, cyanosed and restless. RR - 40 breaths per minute. Stridor was present with intercostal and subcostal recession. There was absent breath sounds bilaterally. HR - 160 beats per minute and capillary refill was delayed more than two seconds. During intubation, white membrane was seen at the post-pharyngeal wall and soft palate. There was significant bilateral cervical lymphadenopathy.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 21**

**PATIENT** is a newborn (boy).

**ANAMNESIS:** newborn from first pregnancy with eclampsia and ureaplasma in the II trimester. Birth at 34 weeks by Caesarean section. Birth weight - 1900 g, height - 42 cm, Apgar score 4/5.

**EXAMINATION**: in the neurological status: expressed depression syndrome. The skin is clean, light pink. Intercostal and subcostal retractions during inspiration, nasal flaring, cyanosis of nasolabial triangle was detected. Auscultation of the lungs-breathing is weakened, crepitation wheezing. Muffled heart sounds, systolic noise over the area of the heart. Abdomen correct shape, soft, accessible to palpation, liver+1.5cm, the spleen is not palpable. Urination independent, urine bright, diuresis=2 ml/kg/hour.

**INVESTIGATIONS:**

**Blood gases:** pH=7.27, BE= –6.2 mmol/l, pCO2=70 mmHg, pO2=35 mmHg.

**The X-ray of the chest:** diffuse decrease transparency of lung fields, air bronchogram.

**CBC:** HGB-180g/L, RBC-5.5x1012/L, WBC-18×109/L, NEUT-57.9%, EO-1%, LYMPH-35%, MONO-6%, BASO-0.1, ESR-26 mm/h.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 22**

**PATIENT** is a boy 7 days old.

**ANAMNESIS:** from first pregnancy with eclampsia in the II trimester. Birth at 32 weeks by Caesarean section. Birth weight - 1800g, height – 40 cm. Apgar score 4/5. He spent 7 days at the department of pathology of newborn in severe condition. The child is oxygen dependent, SatO2 – 90-92% when applying humidified oxygen through oxygen tent (FiO2 above 30%). When weaning from oxygen, observed anxiety and SatO2 decreased to 84-85%.

**EXAMINATION**: in the neurological status: expressed depression syndrome. The skin is clean and light pink. Auscultation: respiratory depression, [bubbling rale](http://www.multitran.ru/c/m.exe?t=354066_1_2&s1=bubbling%20rale)s of various sizes, scattered [dry rales](http://www.multitran.ru/c/m.exe?t=2583984_1_2&s1=%F1%F3%F5%E8%E5%20%F5%F0%E8%EF%FB). Muffled heart sounds, systolic noise over the area of the heart. Abdomen correct shape, soft, accessible to palpation, liver+2cm, the spleen is not palpable. Urination independent, urine bright, diuresis is 2-3 ml/kg/hour.

**INVESTIGATIONS:**

**Chest X-ray:** focal and infiltrative changes. Lung fields of enhanced transparency, there is an alternation of band-shaped seal with areas of lung tissue swelling. Vascular pattern is not observed in the periphery. Heart is in middle position.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 23**

**PATIENT** is a girl, 3 days of life.

**ANAMNESIS:** the child is from the first pregnancy. Childbirth was in term, went normally. Birth weight 3.200g, length 50 cm, screamed at once. Apgar score 8/9 points. Breast feeding was applied immediately, sucked well. Icterus of the skin and mucous membranes appeared at the end of second day of life.

**EXAMINATION**: the child's condition is satisfactory, active. Screams loudly. Sucks well, rarely regurgitates. Flexion pose. Muscle tone is satisfactory. Neonatal reflexes are positive. Skin is clean, icteric, umbilical wound under hemorrhagic crust. Icteric of sclera, mucous of mouth is noticed. In the lungs no wheezing, RR - 38 breaths per minute. Heart sounds are rhythmic, HR - 136 beats per minute. The abdomen is soft and painless. Liver size is normal, painless. Spleen is not palpable. Stool is porridge-like, yellowish-green color. Urinating is normal.

**INVESTIGATIONS:**

The mother's blood is group A(II), Rh-positive, the child's blood group is 0(I), Rh-negative.

**Biochemical analysis of blood:** protein-68 g/l, total bilirubin-186 mmol/l, bilirubin direct-9 mmol/l, ALT-24 U/l, AST-28 U/l, urea-5.6 mmol/l, cholesterol-3.6 mmol/l.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 24**

**PATIENT** is a boy, on the first day of life.

**ANAMNESIS:** the boy was born from a 23-year-old mother, with second Rh-negative blood group. This second pregnancy proceeded with threat of termination during the second trimester. The first pregnancy ended in miscarriage at 13 weeks. She attended the clinic regularly during pregnancy, general investigation was conducted. Childbirth was urgent, independent.

**EXAMINATION**: birth weight - 2,990 g, length - 50 cm, Apgar score 6/8 points. Immediately at birth was noted icteric staining of the skin, membranes, amniotic fluid, and umbilical cord, expressed signs of CNS depression syndrome, hepatosplenomegaly (5 cm liver, spleen 1.5 cm).

**INVESTIGATIONS:**

The mother's blood is O(I), Rh-negative, the child's blood group is group A(II), Rh-positive.

Bilirubin in cord blood was 290 mmol/l. Hemoglobin level 120 g/l.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE** **25**

**PATIENT** is a boy 1 day old.

**ANAMNESIS:** the child was born from a 25-year-old woman having a first Rh-positive blood group. The first pregnancy ended with the birth of a healthy full-term boy. The second pregnancy proceeded with the threat of termination in the first trimester, preeclampsia in the second half. Childbirth was urgent, independent.

**DEVELOPMENT:** birth weight 3,300 g, length 50 cm, Apgar score 8/9 points. 10 hours after birth – increase of icterus of the skin with a tendency to growth was noticed. **EXAMINATION**: state of moderate severity, icterus of the skin and sclera. Liver +3 cm, spleen +1 cm, meconium stool, urine output is adequate.

**INVESTIGATIONS:**

The mother's blood is group 0(I), Rh-positive, the child's blood group is B(III), Rh- positive.

**Biochemical analysis of blood:** total protein - 52.4 g/l, total bilirubin - 260 mmol/l, bilirubin direct - 3mmol/l.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 26**

**PATIENT** is a child at the age of 1.5 months.

**ANAMNESIS:** was admitted due to prolonged jaundice.

**EXAMINATION**: severe condition. The child was lethargic, adynamic, rough and husky voice, broad nasal bridge, and large tongue. Skin is icteric, cold, dry. Icteric sclera. Muscle hypotension is noted. In lungs, no wheezing, RR - 34 breaths per minute. Cardiac sounds a bit muffled, HR - 88 beats per minute. Distended abdomen, soft and painless. Liver +3 cm, spleen is not enlarged. Tendency to constipation.

**INVESTIGATIONS:**

**Biochemical analysis of blood:** indirect bilirubin – 250 mmol/l, glucose – 2.2mmol/L. Bile pigments in the urine were found.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 27**

**PATIENT** is a child is 5 months old.

**ANAMNESIS:** the child was born in August from fourth four pregnancy occurred with toxicity at the first trimester. Delivery in term. Birth weight 3600 g, length 53 cm, cried directly. Breast feeding up to 2 months, then on artificial-feeding. In the past 2 months mother noticed that the child was restless, flinched in his sleep, sweated profusely, from nappies strong smell of ammonia.

**EXAMINATION**: weight - 7200g, length - 69 cm, baby could not turn around his body, he can hold his head. Flattening and alopecia of the occipital was noticed. Fontanelle 4x4 cm, the edges was malleable. The lower thoracic was deployed, Harrison's groove visible, palpable rib. Muscular hypotonia, poorly supported on legs. In the natural folds of the skin there were manifestations of sweat rash, resistant red dermographism. The abdomen is swollen, spread-eagled. Liver is 2.5 cm, spleen +0.5 cm. Stool porridge-like, 2 - 3 times daily.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 28**

**PATIENT** is a girl 4 months old. The mother said that the child was recently flinch, restless, sleep anxiously, often screams and wakes up. After sleeping on the pillow, it became wet with sour smell of sweat. Child is on breastfeeding.

**EXAMINATION**: weight - 5800g, length – 58cm. The baby can’t hold his head. Flattening and alopecia of the occipital was noticed. Fontanelle 3x4 cm, the edges was malleable. The lower thoracic was deployed, Harrison's groove visible, palpable rib. Muscular hypotonia, poorly supported on legs. In the natural folds of the skin there were manifestations of sweat rash, resistant red dermographism. The abdomen is swollen, spread-eagled. Liver is 2.5 cm, spleen +0.5 cm. Stool porridge-like, 2-3 times daily.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 29**

**PATIENT** is a 6 years old boy

**ANAMNESIS:** from a wound which appeared after extraction of tooth, the strong bleeding began. When collecting stories, found his brother has severe bleeding. Mom's brother died from heavy bleeding in early childhood. Boy with a significant injury has extensive bruising and prolonged bleeding.

**EXAMINATION**: T -36.60C, RR - 22 breaths per minute, HR - 100 beats per minute, BP - 90/60 mm Hg. Skin pale and extensive bruising on the legs. Her oral mucosa is moist. The wound is bleeding after tooth extraction. In lungs vesicular breathing, no wheezing, heart sounds loud rhythmic. An abdomen is soft, painless at palpation.

**INVESTIGATION:**

**CBC:** Hb-122 g/L, RBC-4,3x 1012/L, WBC -11х109/L, HCT-26%, PLT - 650 x109/L, ESR - 15 mm/hour.

F-VIII - 4%, F-IX 70%.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 30**

**PATIENT** is a child 4 months old.

**ANAMNESIS:** was born from young, healthy parents, born in term, at spring. Birth weight is 3850, length - 50 cm. He is on breastfeeding. In the last two months, the child was anxiety, increased in sweating.

**EXAMINATION**: baldness of occipital flattening of the skull bones, softening along the sagittal suture, soft focus of the parietal bone 0.8 - 0.9 cm in diameter. Muscle tone is sharply reduced. Hyperesthesia. Sportiness on the legs is missing. Abdomen is flattened. Tissue turgor decreased. RR - 28 breaths per minute, cardiac tones clear, rhythmic, HR - 136 beats per minute. Liver +3.5 cm, stool with a tendency to constipation.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 31**

**PATIENT** is a boy 5 months.

**ANAMNESIS:** from pregnancy II with the threat of interruption in the trimester I of pregnancy. Birth weight - 2500 g, and height - 48 cm. She suffered acute respiratory infection and pneumonia.

**EXAMINATION**: weight - 4600 g, temperature 36.5°C. HR -160 beats per minute. RR - 48 breaths per minute. The skin is pale, clean. Of the chest revealed a mild left precordial bulge. On palpation is systolic tremor in III-IV intercostal space on the left. Percussion border of the heart: the left - anterior axillary line, right - right parasternal line, upper - upper edge of II rib. Heart sounds loud, listen to rough systolic murmur along the left sternal border, p.max. III - IV intercostal space on the left. In the lungs: fine moist rales on both sides, on exertion - increasing dyspnea. Liver +5.0 cm. Spleen+1.5 cm. Urine output is saved.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 32**

**PATIENT** is a girl 6 months old.

**ANAMNESIS:** from normal pregnancy II and delivery on time. Her mother was operated at the age of 1.5 years - congenital heart disease. Birth weight 3000 g, height - 50 cm three times suffered acute respiratory infections, pneumonia once.

**EXAMINATION**: the child's weight is 5800, the head is held from 4 months, not sitting. The skin is pale. RR- 40 breaths per minute, in the lungs auscultation isolated rales in the lower parts. The left border of the relative cardiac dullness 1 cm outside from the left anterior axillary line, right - the right edge of the sternum, upper - I intercostal space. Heart sounds loud, HR - 140 beats per minute, palpation determined systolic tremor at the a I intercostal space on the left of the sternum, systolic-diastolic murmur at the II - III intercostal space on the left, the accent of II sound at the pulmonary artery. Liver-4.0 cm. Spleen-1.0 cm. Edema is absent.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 33**

**PATIENT** is a girl 9 months old.

**ANAMNESIS:** from III pregnancy with ARI in the first trimester: III term birth, birth weight - 2700g, height 46 cm.

**COMPLAINTS:** of attacks of breathlessness, cyanosis, which recently began daily. The attacks came a month ago, the child to sit or lie down when they start.

**EXAMINATION**: weight - 8200g, height 65 cm, cyanosis of the lips, visible mucous membranes, hands, feet, enhanced by a crying. Dyspnea is RR - 44 breaths per minute. In the lungs weakened breathing, wheezing is not listen. Area of ​​the heart is not changed, percussion border of relative cardiac dullness: left - 1.5 cm outside of the left mid-clavicular line, right - 0.5 cm outside from the right edge of the sternum, upper - edge of the II rib. Heart sounds loud, HR - 160 beats per minute, II sound in the pulmonary artery is weakened, rough systolic murmur along the left sternal border, the epicenter of II-III intercostal space on the left. Liver + 1.0 cm.

**INVESTIGATIONS:**

**CBC:** HGB-180 g/L, RBC-6.5x1012/L, WBC-10.1×109/L, MCH-0.98p/g, NEUT-59.9%, EO-1%, LYMPH-32%, MONO-7%, BASO-0.1, ESR-2 mm/h.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 34**

**PATIENT** is a 9-year-old boy with complaints puffy eyes and scant urine

**ANAMNESIS:** his general health has been good until 2 weeks ago when he developed a sore throat and swollen glands. An antibiotic was started at that time.

**EXAMINATION**: T -36.60C, RR - 22 breaths per minute, HR - 90 beats per minute, BP - 150/90 mm Hg. Skin pale and facial swelling and edema in his feet was detected. Her oral mucosa is moist and clean. In lungs vesicular breathing, no wheezing, heart sounds loud rhythmic. An abdomen is soft, painless at palpation.

**INVESTIGATIONS:**

Creatinine - 1.8 mg/dL (0.22-0.59), albumin - 3.2 g/dL (3.5– 5.6 g/dL), ASO titer - 330U (< 240 U).

**Urine analysis** – specific gravity – 1018, protein – 1.0 g/L, RBC – 10–20 of visual field, WBC – 2-4 of visual area. Urine protein is 2 g/24 hr

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 35**

**PATIENT** is a 6 years old child.

He complained of pain, which appeared in the bones of the feet, fatigue, malaise. The history of the family - is not burdened. The history of the disease - acute respiratory infections are rarely sick, grown and developed in accordance with age. Patient is ill during 3 months.

**EXAMINATION**: T - 37.30C, RR - 22 per minute, HR - 90 per minute. Skin pale and bruising on the legs. In a patient it is revealed enlargement of jugular and axillary lymphatic nodes, size - 6,0х7,0 sm, consistence – softly-elastic, a liver comes forward from under a costal arc on 5 sm, spleen - on 8 sm, at palpation – sensible; sweating, weakness, weight loss. In the lungs, vesicular breathing, wheezing not listen. The area of the heart is not changed. Heart sounds are loud, rhythmic, noise is not listening.

**INVESTIGATIONS:**

**CBC:** HGB-112 g/L, RBC-4.5x1012/L, MCH- 0.9p/g, WBC-18 ×109/L, NEUT-9.9%, EO-1%, LYMPH-89%, MONO-2%, BASO-0.1, ESR-20 mm/h.

**The lab reports:** blasts sells – 30%.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 36**

**PATIENT** is a 2.5 months old boy.

**COMPLAINTS:** dry cough, dyspnea.

**EXAMINATION**: T 37.5 C. Pale skin with marble pattern, perioral cyanosis. Nasal breathing is difficult, mucous discharge. Frequent unproductive cough. Retraction of the intercostal spaces in breathing, respiratory rate to 76 breaths per minute. In light percussion - sound box. Auscultation in the lungs - harsh breathing, on both sides dry and wet wheezing, with prolongation of the expiratory phase of breathing. Heart sounds mildly muffled, rhythmic. HR 150 beats per minute. Abdomen is soft, liver +4.5 cm. Stool and urine output are normal

**INVESTIGATIONS:**

**Chest** X-r**ay -** swelling of the lung tissue, focal-infiltrative changes are not detected. Segmental atelectasis at S2 to the right, pulmonary pattern is not strengthened, the shadow of the heart is not enlarged, visible small shadow of thymus gland.

**Test for RSV** - positive.

**CBC:** HBC - 141 g/l, RBC - 5.13 x1012/l, WBC - 11.62x109/l, stab - 2%, segment - 35% LYM - 51%, MON - 12%, ESR - 2 mm/h.

Sat O2 - 91%

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 37**

**PATIENT** is a 4 month old female with fever and loose stools.

**ANAMNESIS:** she had fever for 3 days, and 5-6 episodes of emesis on the first day of illness. Stools were liquid on the first and second days of illness. Vomiting and diarrhea have resolved, but she is breast-feeding less well than usual. Her mother notes that her urine seems "strong" and that she is not as playful as usual. Mom notes that the child cries during urination.

**EXAMINATION:** Temperature - 38.90C, HR – 164 beats per minute, RR – 40 breaths per minute, weight 5.3kg. She is alert, smiling, active, not toxic, and in no distress. The child is observed swelling of the eyelids and dysuria. Her anterior fontanelle is soft and flat. Her oral mucosa is moist. Heart rate is regular without murmurs. Lungs are clear and her respirations are non-labored. Her abdomen is flat, soft, non-tender, without hepatosplenomegaly or masses. Her external genitalia are normal. **INVESTIGATIONS:**

**CBC:** HGB-120 g/L, RBC-4.5x1012/L, WBC-9.4 ×109/L, PLT-389 x109/L, NEUT-50.9%, EO-2%, LYMPH-44%, MONO-3%, BASO-0.1, ESR-26 mm/h.

**Urine analysis** – specific gravity – 1018, protein – abs, RBC – 0–1 of visual field, WBC – 20-40 of visual area.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 38**

**PATIENT** is a 9 years old child, from normal pregnancy II and delivery on time. Complaints of recurrent epistaxis, low-grade fever, recently increased dyspnea. 1 month ago she suffered a sore throat, without any treatment.

**EXAMINATION**: the temperature is 37.4°C. The skin on the trunk and extremities erythematous macula detected with pale centers. In the lungs: breathing weakened, no wheezing. Heart sounds loud systolic murmur p.max. II-III intercostal space on the left; and short diastolic murmur in the III intercostal space on the left side. HR - 110 beats per minute, RR - 32 per minute. Her abdomen is flat, soft, and non-tender, without hepatosplenomegaly or masses. Right knee joint increased in size, warm, and movements are restricted. Urine output is saved.

Stool with a tendency to constipation.

**INVESTIGATIONS:**

**CBC:** HGB-148g/L, RBC-5.5x1012/L, WBC-28 ×109/L, NEUT-76.9%, EO-1%, LYMPH-19%, MONO-4%, BASO-0.1, ESR-35mm/h.

CRP-0, 08 mmol/L (normal <0.005)

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 39**

**PATIENT** is a 4 years old child. Early anamnesis was normal. In the last year three times suffered from purulent otitis, twice a year is tonsillitis, 2 months before admission operated on for lymphadenitis.

**ANAMNESIS:** complains of febrile fever for 2 weeks, weakness, anorexia, arthralgia and pronounced sweating.

**EXAMINATION**: the skin and visible mucous membranes are pale, no catarrhal symptoms; joints are hot, red, swollen and exquisitely tender. The temperature of 38.0°C, RR - 36 breaths per minute, heart rate is 128 - beats per minute. In the lungs: breathing hard, no wheezing. Area of ​​the heart is not changed, the border of the relative cardiac dullness extended to the left, heart sounds are muffled, rhythmic, soft diastolic murmur auscultated, worse when standing, p.max. - III-IV intercostal space. The abdomen is soft and painless. 3.5 cm liver, spleen 3 cm. Diuresis saved. Stool with a tendency to constipation.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 40**

**PATIENT** is a 4 years old child.

**ANAMNESIS:** early anamneses were normal. He admitted with complaints of emonitional lability, incoordination, poor school performance, tachycardia, shortness of breath, low-grade fever. Symptoms appear two weeks ago after an acute respiratory infection.

**EXAMINATION**: she was diagnosed uncontrolled movement of arms and legs. The skin and visible mucous membranes are pale, no catarrhal symptoms, apparently not changed and the temperature of 37,5 ° C, RR - 36 breaths per minute, HR - 128 beats per minute. In the lungs: breathing hard, no wheezing. Area of ​​the heart is not changed, the border of the relative cardiac dullness extended to the left, heart sounds are muffled, rhythmic, soft diastolic murmur auscultated, worse when standing, p.max. - III-IV intercostal space. The abdomen is soft and painless. 3.5 cm liver, spleen 3 cm. Diuresis saved. Stool with a tendency to constipation.

**INVESTIGATIONS:**

**CBC:** HGB-100 g/L, RBC-4.5x1012/L, WBC-20 ×109/L, NEUT-80%, EO-1%, LYMPH-16%, MONO-4%, BASO-0.1, ESR-26 mm/h.

**Blood analysis:** ASLO-1:250, Circulating Immune complexes - 474 (normal 200).

In two of the three blood cultures obtained by growth of Staphylococcus aureus.

**ECG**- shows sinus rhythm, deviation of EA to the left; QRS voltage is reduced, diffuse metabolic disturbances in the myocardium

**Echocardiogram:** a moderate increase in the left ventricular cavity, separation of pericardium + 6 mm, hypokinesis of ventricular septum, bicuspid aortic valve, valve thickened, on one of the cusp(leaflet) moving formation with a diameter of 2-3 mm is identified, the aortic valve regurgitation 2+.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 41**

**PATIENT** is a 1 month old child.

**ANAMNESIS:** admitted in a serious condition, weight 3,200 g, gained 200 g for the first month. Restless, not actively takes breast, gets tired easily while feeding.

**EXAMINATION**: today the state has worsened: sluggish, regurgitates, pale skin, RR - 52 breaths per minute, HR - 184 beats per minute. In the lungs: breathing hard, fine moist rales. Precordial area is not changed, percussion border within the age norms, sounds are rhythmic, tachycardia, mild systolic murmur auscultated at the left of the sternum, systolic murmur heard on the back in intrascapular area. Sharply weakened pulse on arteries femoralis on both sides, right arm BP - 115/70 mm Hg, the right leg 75/35 mmHg

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 42**

**PATIENT** is a newborn (girl)

**ANAMNESIS:** from a 40-year-old mother with a complicated anamnesis of somatic disease (hypertension), from third pregnancy (1st – medical abortion, 2nd – term delivery). This pregnancy occurred with the threat of interruption in the I and III-rd trimesters, operative delivery by Caesarean section at 29 weeks due to eclampsia of pregnancy. At birth: weight – 2,300 g, height – 42 cm, Apgar score 5/6 points.

**EXAMINATION**: the patient’s temperature was 37.6°C, BP 60/30 mm Hg, HR - 174 beats per minute (110 to 180), RR - 62 breaths per minute (30 to 60). The skin is clean, light pink, noticed cyanosis of nasolabial triangle. There were moderate subcostal retractions, shallow respirations, and bronchial breath sounds that were slightly diminished in intensity; the remainder of the examination was normal for the gestational age.

**INVESTIGATIONS:**

Chest X-ray: diffuse, fine granular opacities and mild peripheral linear opacities bilaterally.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 43**

**PATIENT** is an 11-month-old female infant

**HISTORY OF DISEASE:** has admitted with a 2-day history of passage of loose stools, poor suck and high grade fever. There was no history of cough, vomiting, jaundice, passage of dark urine, or ear discharge. She started having seizures 1-day prior to admission, seizures were localized to the upper limbs and subsequently became generalized.

**EXAMINATION**: revealed a well-nourished infant with a blank, vacant look and a temperature of 38.5°C. Neurological examination revealed some neck stiffness; global hypertonia and hyperreflexia. The ears, nose and throat were clear and the cardiovascular and respiratory systems were normal. The liver was tipped and spleen was not enlarged.

**INVESTIGATIONS:**

CBC: HGB -120 g/l, RBC - 4.5x1012/l, PLT - 240x109/l, WBC – 10.4x109 / l, NE- 44.9%, EO - 1% LYM - 43%, MON - 12%, BASO-0.1, ESR - 26 mm /h

CSF: GLU - 48mg/dl (RPG-119mg/dl), WBC - 5cells*/*pl*(*mainly lymphocytes*),* Protein - 25mg/dl. Bacteriological: Salmonella typhi.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 44**

**PATIENT** is a newborn is a second baby born after a normal pregnancy of 34 weeks. Weight was 2,100 g, length was 40 cm. Axillary temperature was 36,4°C.

**EXAMINATION**: a newborn infant at one minute has acrocyanosis and weak response effort at 30 breaths per minute. HR is 95 beats per minute, systolic murmor heard. He has weak reflexes in all four, only after external stimulation. When her nose and mouth are suctioned he is cry with some motion.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE** **45**

**PATIENT** is a 4 days newborn girl

**ANAMNESIS:** from anamnesis we know that the mother's first pregnancy ended by abortion, 2nd pregnancy proceeded with toxicosis, anemia in the 1st half. Delivery at 38 weeks, the boy died on the 2nd day after birth (generalized edema and respiratory failure). This third pregnancy proceeded with toxicosis in the 1st half. Delivery was at home. Birth weight 3,200 g, length 50 cm, screamed at once. Breast feeding was applied immediately, sucked well. During the first hours of life appeared yellowness of the skin, which quickly escalated. On the third day of life, anxiousness appeared, twitching of facial muscles was noticed, began to regurgitate.

**EXAMINATION**: serious condition, restless, screams loudly, throws his head back, horizontal nystagmus. Expressed icterus of skin and sclera noted. Hypersensitivity. Muscle hypertension with dystonia D>S. In the lungs, no wheezing, RR - 60 breaths per minute. Heart sounds are rhythmic, HR - 170 beats per minute. The abdomen is soft, painless, liver +4 cm, spleen 2 cm. Urine is light.

**INVESTIGATIONS:** the mother's blood group is 0 (I) first Rh-negative, the child's blood group is 0 (I) Rh-positive.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 46**

**PATIENT** is a 7 year old boy

**ANAMNESIS:** was admitted to the hospital with complaints of fever, abdominal pain, loose stools and not accepting feeds since 2-3 days. There was no history of vomiting. Grossly the stools were yellowish green, semisolid, foul smelling and with a frequency of 10-12 per day.

**EXAMINATION**: he was irritable, pale, lethargic and cachexic with low grade fever. General condition was poor. His eyes were dry and platynychia was noted. Skin pinch retracted slowly. Pulse was 126 beats per minute, RR – 20 breaths per minute, blood pressure 90/70 mmHg.

**CBC:** HGB -120 g/l, RBC - 4.7x1012/l, PLT - 240x109/l, WBC – 28x109 / l, NE- 68%, EO - 1% LYM - 25%, MON - 6%, ESR - 24 mm /h

On testing with antisera for serotyping, it was identified as Shigella dysenteriae.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 47**

**PATIENT** is a child at the age 2 days.

**ANAMNESIS:** was born from 25 years mother, second pregnancy (I pregnancy - term delivery, child 5 years old, healthy), flowed with disease catarrhal signs at the 10-th weeks of gestation, in II - III trimesters with the threat of termination of pregnancy. Birth at 34 weeks, spontaneous. Birth weight 2100 g, length 45 cm, head circumference 29 cm, chest - 30cm Apgar score 4/7 points.

**EXAMINATION**: the child in serious condition, reduced muscle tone, newborn reflexes quickly exhausted. Multiple stigma of disembryogenesis, microphthalmia. Pale skin, acrocyanosis. Auscultation, no wheezing. RR 46 breaths per min. Heart borders percussion right - 1 cm lateral to the right edge of the sternum, left - 2 cm laterally from the midclavicular line. Cardiac tones are rhythmic, HR 168 per min, systolic murmur along the left sternal border. The abdomen is soft and painless. The liver and spleen are normal. Urinates normally.

**INVESTIGATIONS:**

CBC: HGB -180 g/l, RBC - 4.7x1012/l, PLT - 240x109/l, WBC – 8x109 / l, NE- 62%, EO - 1% LYM - 25%, MON - 12%, ESR - 4 mm /h

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 48**

**PATIENT** is a boy 5 day old.

**ANAMNESIS:** from history it is known that the child from the 2nd pregnancy (1st abortion), birth weight 4250 g, height 52 cm, Apgar score 6/8 points.

**EXAMINATION:** his temperature - 35.8ºC. Head size is normal, but posterior fontanel larger than 0.5 cm. The skin is cold, pale and mottled with a marble pattern. Edema of the genitals is present. Abdominal examination revealed generalized abdominal distention with umbilical hernia. Neurological examination showed generalized hypotonia and hyporeflexia. The respiration rate is 36 breaths per minute. Auscultation of the chest: breathing is puerile. Heart tones are clear and rhythmic. HR - 90 beats per minute. Liver +1.5 cm. Urine output is adequate. Stool once a day. The child is calm on examination, sometimes falls asleep.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 49**

**PATIENT** A girl 5 days old, from the 4th of pregnancy. The gestation course was with placental insufficiency, preeclampsia of I-II half. The birth was at 32 week. The birth weight was 1,800 g, the length was 40 cm. The child’s condition after the birth was severe due to respiratory distress syndrome, respiratory failure and CNS depression syndrome. On the 2nd day of the life the condition worsened due to episodes of apnea (about 20 seconds). Tonic seizures appeared on the 4th day of the life.

**EXAMINATION** on the 5th day: feeding through tube, depressed reflexes, tendon reflexes on the left was normal, tremor of limbs, anterior fontanel 2,5x2,5 cm, bulging, pulses, posterior fontanel 1x1 cm, divergence of the sagittal suture 1.0 cm; on mechanical ventilation, pale skin. Heart sounds were muffled, heart rate 152 beats/min. Respiratory rate 40 breathes/min. She has puerile respiration, no wheezing. The abdomen is soft, moderately swollen. Liver +1.5 cm. Urination up to 5 times daily. Stool 4-5 times daily.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 50**

**PATIENT** is an 11 years old female, presented with skin rash of four days duration. **ANAMNESIS:** she gave history of having fever for a day on the day of appearance of skin rash. She denied any history of any drug intake prior to appearance of skin rash or any respiratory, bowel or urinary symptoms. She was in contact with her uncle with Herpes zoster 3 days ago.

**EXAMINATION**: general physical and systemic examination on the day of presentation did not reveal any abnormality. Dermatological examination revealed numerous polymorphic skin lesions in various stages of development like macules, papules, vesicles and crusted lesions over the face, neck, chest, abdomen and scalp in bilaterally symmetrical distribution. Few erythematous erosions were also present on oral mucosa.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 51**

**PATIENT** is a 7-year-old girl

**COMPLAINTS:** she complained of running nose, coughing and shortness of breath. Dyspnea developed shortly after the onset of rhinorrhea after a walk.

**HISTORY**: her father and mother are well. Grandmother in paternal side has allergic conjunctivitis. Father does not smoke. They have any cat and carpets in house. She has been diagnosed to have asthma since he was 4 years old. She was commenced on ICS at the age of 4 years. For the last 6 months (which corresponds to the colder months), episodes of wheezing breath was repeated up to 4 in a month, especially when it is active, and at night - up to 1 per month. She had food allergy (fish, egg) and pollinosis (sagebrush).

**EXAMINATION**: Skin is clean. Productive cough, sputum was light yellow with some clear mucus. Amount was about one tea spoon. His chest was hyperinflated. He had dyspnea, RR 30 - breaths per minute. Auscultation - had wheezes bilaterally. Heart sounds loud, rhythmic. HR - 90 beat per minute. The abdomen is soft and painless. Stool and urine output are normal.

**INVESTIGATIONS:**

Peak expiratory flow - 78%

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 52**

**PATIENT** is a girl, 7 months old.

**HISTORY OF DISEASE:** the onset of his illness suddenly, complicated nasal breathing, plentiful mucopurulent discharge in the nose, a temperature of 37.4 ° C appeared. He had contact with ill older brother. The pediatrician diagnosed acute respiratory illness, prescribed symptomatic treatment. After 2 days his condition worsened. His temperature rose by 38.6 °C. The baby was restless and refused breastfeeding.

**EXAMINATION**:severe condition. The baby was lethargy, inhibited. Skin is pale with a grayish tinge, central cyanosis. Breastfeeding was difficulty. Intercostal, subcostal, and suprasternal retractions, nasal flaring were reveal. RR - 68 breaths per minute. Muffled heart sounds, HR - 160 beats per minute. The chest inflated. In the pulmonary fields on the right, dullness on percussion, diminished breath sounds, with moist rales on auscultation. Distended abdomen, without hepatosplenomegaly or masses. Urine output is adequate.

**INVESTIGATIONS:**

**Oxygen saturation** - 92%.

**Chest** X-r**ay**: the projection of the upper and middle lobe of the right lung homogeneous inflammatory infiltration of lung tissue.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 53**

**PATIENT** is a 6-year old boy

**COMPLAINTS:** his mother complained on fever and rash.

**EXAMINATION**: the patient had macules over generalised erythema covering the trunk and extremities, circumoral pallor, tonsillopharyngitis, Forchheimer's spots, white strawberry tongue and Pastia's lines along skin folds over the antecubital fossae. RR - 26 breaths per minute. Auscultation - vesicular breathing, without wheeze. Heart sounds loud, rhythmic, HR - 96 beats per minute. The abdomen is soft and painless. The liver and spleen are normal. Stool and urine output are normal.

**INVESTIGATIONS:**

Laboratory work up revealed haemoglobin 12 mg/dl, leukocytes 11200 /ml with 67% neutrophils, 22% lymphocytes; erythrocyte sedimentation rate of 61 mm/hr; serum C reactive protein was 37 mg/l (normal < 3mg/l).

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 54**

**PATIENT** is a 4-year-old boy

**COMPLAINTS:** his mother complained of shortness of breath and coughing. The dyspnea developed for the first time on the night after an evening walk in the park.

**HISTORY OF DISEASE:** At night, mother noticed that he was snoring during sleeping. Then around 4a.m, he suddenly woke up from sleep. He starts to cough continuously and develop the shortness of breath together with rapid breathing. He was then brought by his parents to an allergic center.

**ALLERGIC ANAMNESIS:** he has pollinosis (sagebrush, ambrosia and quinoa).

**EXAMINATION**: he was conscious and cooperative and orientated to time and place. His hydration and nutritional status were good. Skin is clean. Nasal discharge mucous. He was in respiratory distress as there was suprasternal and subcostal recession. His chest was hyperinflated. He had dyspnea, RR 40 breaths per minutes. Auscultation of the chest showed reduced breath sounds throughout the lung fields with widespread expiratory wheeze. Heart sounds loud, rhythmic. HR 110 beat per minute. The abdomen is soft and painless, without hepatosplenomegaly or masses. Stool and urine output are normal.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 55**

**PATIENT** is a newborn, 1 day.

**ANAMNESIS:** A girl was born from a 20-year-old woman, first pregnancy, during pregnancy recurrent acute pyelonephritis. At hospital, in the mother’s vaginal smears discovered *Streptococcus group B* *(Streptococcus agalactiae).* Birth in 39-40 weeks, long anhydrous period (26 hours).

**EXAMINATION**: birth weight 3,300 g, length 52 cm, Apgar score 8/9. Deterioration in condition was observed at the age of 18 hours. Temperature rose to 38.8º C. Cyanosis of nasolabial triangle, tachypnea to 50 breaths per minute, the appearance of regurgitation is noted. In the lungs, breathing is weakened, absent in the lower divisions, crepitation wheezing. In the neurological status – moderate depression. Muffled heart sounds, tachycardia 167 beats per minute. Abdomen is soft, available deep palpation, liver +3.5 cm, the spleen – at the edge costal arch. Decreased urine output – 0.3-0.5 ml/kg/h, urine is transparent.

**INVESTIGATIONS:**

CBC: HGB -180 g/l, RBC - 5.0x1012/l, PLT - 240x109/l, WBC – 35x109 / l, NE- 71%, EO - 1% LYM - 19%, MON - 9%, ESR - 24 mm /h

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 56**

**PATIENT** is a boy 5 years old.

**COMPLAINTS:** he complained of a headache, a high temperature to 39.2ºC, a pain of the neck, which was worse when swallowing and turning the head.

**HISTORY OF DISEASE:** one week before admission, he was ill. He had high temperature and sore throat. The pediatrician diagnosed acute respiratory illness, prescribed symptomatic treatment with a positive effect. However, today the temperature rose again and there is pain and swelling of the neck.

**EXAMINATION**: the skin is pink, hot. The thyroid gland enlarged, painful in palpation, hyperemia of the skin above it. RR - 26 breaths per minute. Auscultation - vesicular breathing, without wheeze. Heart sounds loud, rhythmic, HR - 110 beats per minute. The abdomen is soft and painless. The liver and spleen are normal. Stool and urine output are normal.

**INVESTIGATIONS:**

CBC: HGB -124 g/l, RBC - 4.2x1012/l, PLT - 223x109/l, WBC – 15.3x109 / l, NE- 65%, EO - 1% LYM - 33%, MON - 1%, ESR - 16 mm /h

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 57**

**PATIENT** is a girl 5 months olds, fell ill after contact with his older sister (four years). The disease develops gradually, first on the nasal breathing was disturbed, and then a cough appeared. Temperature was 37.2 ° C. On the third day of illness, there was difficulty in breathing during feeding.

**EXAMINATION**: the condition of the child is moderate, health suffers a little, actively moves, cheerful. Skin pale, perioral cyanosis during exercise is detected. The respiration rate is 56 breaths per minute, HR - 148 beats per minute. Nasal breathing is moderately difficult. The chest inflated; there is expiratory wheezing with retractions of intercostal spaces, aggravated by physical effort. Auscultation: dry wheezing through all pulmonary fields. The abdomen is soft and painless. The liver and spleen are normal. Stool and urine output are normal.  
**INVESTIGATIONS:**

**Chest** X-r**ay** - no focal infiltrative shadow, lung fields of enhanced transparency.

**SatO2** - 96%

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 58**

**PATIENT** is a 12-year-old girl

**COMPLAINTS:** she complained of irritability, sweating, tremor of hands, palpitation, decreasing of body weight in normal appetite.

**ON EXAMINATION**: his weight and height are less than 25th centile. Skin is clean, warm and wet, mild exophthalmia and hyperemia of conjunctiva, positive signs of Grefe, Koher and Moebius. The thyroid gland is enlarged, which is visible when swallowing, elastic, сpainless on palpation. RR - 30 breaths per minute. Auscultation - vesicular breathing, without wheeze. Heart sounds loud, arrhythmic, HR - 110 beat per minute, occasional extrasystoles are listened. BP - 130/77 mmHg. The abdomen is soft and painless. The spleen is not palpable. Stool and urine output are normal.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 59**

**PATIENT** is a girl 7 year old.

**COMPLAINTS:** for severe polyuria, polydipsia and lethargy.

**HISTORY OF DISEASE:** She had a 3-day history of frequent urination (3–4 times every hour), polydipsia, and lethargy. Although she drank more beverage than usual, she felt excessive thirst and lost weight from 22 to 19.6 kg in 7 days. She had recently moved to a new house and was having a hard time fitting in at the new school.

**EXAMINATION:** height was 127.4 cm (50th–75th percentile), weight was 19.6 kg (5th–10th percentile), and body mass index (BMI) was 12.08 kg/m2 (<first percentile). Her temperature is 37.2°C, HR - 88 beats per minute, RR - 18 beats per minute, BP - 100/60 mm Hg. Her mental status was normal, sensation was intact, and motor strength was quite good considering her condition. However, she looked cachectic and lethargic. Auscultation - vesicular breathing, without wheeze. Heart sounds loud, rhythmic. The abdomen is soft and painless. The liver and spleen are normal. Stool and urine output are normal.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**CASE 60**

**PATIENT** is a 13-year-old girl

**COMPLAINTS:** to the general weakness, fatigability, enlargement of neck.

**HISTORY OF DISEASE:** she stated that the symptoms began more than a year ago. Her father and mother are well.

**DEVELOPMENT** corresponds to age.

**ON EXAMINATION**: his weight and height in the 50th centile. Skin is clean. The thyroid gland was enlarged to II-III degree; nodes that were dense and painless during palpation were identified. RR - 16 breaths per minute. Auscultation - vesicular breathing, without wheeze. Heart sounds loud, rhythmic, HR 86 - beats per minute. BP is 120/75 mm Hg. The abdomen is soft and painless. The liver and spleen are normal. Edema is absent. Stool and urine output are normal.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

**Тестовые задания** для проведения промежуточной аттестации формируются на основании представленных теоретических вопросов. Тестирование обучающихся проводится в информационной системе Университета

**Вопросы для проверки теоретических знаний по дисциплине «Педиатрии» для 6 курса**

1. Cough: pathophysiology, history, physical examination, diagnostic studies, differential diagnosis and treatment.
2. Respiratory distress: diagnostic approach, history, physical examination, laboratory tests, imaging, causes of respiratory distress.
3. Chest pain: causes of chest pain, approach to the patient with chest pain.
4. Murmurs: pediatric cardiovascular evaluation, symptoms and signs of heart disease, cardiovascular assessment, classification of cardiac murmurs, physical examination.
5. Acute abdominal pain: history, physical examination, laboratory evaluation, imaging evaluation, management, specific causes of acute abdominal pain.
6. Chronic abdominal pain: making a diagnosis of functional abdominal pain, severity and location of pain, approach to treatment.
7. Diarrhea: acute diarrhea, chronic diarrhea, chronic nonspecific diarrhea.
8. Vomiting: definition, neuroanatomy of vomiting, data to guide the diagnosis.
9. Dysuria: neonates, children 2-24 months of age, preschool children, school-aged/prepubertal children, adolescents.
10. Proteinuria: nephrotic syndrome in young children, minimal change disease, other forms of nephrotic syndrome.
11. Proteinuria: nephrotic syndrome in infants younger than 1 year, asymptomatic proteinuria disorders.
12. Hematuria: gross hematuria microscopic hematuria more common causes of hematuria.
13. Fever: pathophysiology of fever, fever without source.
14. Fever: history, physical examination, differential diagnosis, role of diagnostic testing in patients with fever without source, evaluation and management.
15. Central nervous system infections.
16. Fever of unknown origin.
17. Fever and rash: history, examination, specific skin lesions, other physical examination findings, diagnostic studies, laboratory tests, diagnosis and decision making.
18. Urticaria.
19. Erythema Multiforme .
20. Stevens–Johnson Syndrome/Toxic Epidermal Necrolysis Complex.
21. Allergic Contact Dermatitis.
22. Jaundice in the neonate and infant.
23. Jaundice in the child and adolescent.

**Практические задания для проверки сформированных умений и навыков**

**по дисциплине «Педиатрии» для 6 курса**

**Case 1**

**PATIENT:** a 4.5-month-old female.

**ANAMNESIS:** the infant was reported to have had 10 watery stools over the previous 24 hours, during which she became quite unsettled, crying a lot, whilst drinking half her usual amount of liquids. There was no history of vomiting.

The infant did not receive a vaccine against rotavirus up until the current hospitalization episode.

**EXAMINATION:** infant with a temperature of 39.9◦C, heart rate between 170 and 190 beats/min, respiratory rate between 40 and 80 breaths/min, blood pressure of 102/55 mmHg.

The child’s weight at admission into hospital was 3990 g, meaning she lost 10% of the previous reported weight.

The skin was pale grey, tenting skin turgor, dry lips and dry buccal mucosa, normal looking eyes but reduced tears, soft fontanelle. The urine output was also decreased.

The abdomen was swollen and slightly painful on palpation, no hepatosplenomegaly.

**Laboratory and instrumental investigation:**

**CBC:** HGB 126 g/L, WBC 16,8\*109/l, NEUT-35%, MONO-1%, LYMPH-64%, C-reactive protein 13 mg/l, Bicarbonate level 8 mmol/l, Sodium 143 mmol/l

Routine stool specimen tested positive for rotavirus antigen. Abdominal and thorax radiographs were normal.

**QUESTIONS:**

1. Assess investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 2**

**PATIENT:** a 7-year-old boy with complaints of intense epigastric pain accompanied by nausea and vomiting.

**ANAMNESIS:** the patient related that the pain awoke him from his sleep earlier that morning. Yesterday he visited McDonald's, where he ate French fries, big mac, coca-cola.

The pain was sharp, steady, boring located mostly in the epigastric region, radiates to the back, and associated with three episodes of vomiting.

**EXAMINATION:** body temperature – 39,30C. Swollen neck glands (lymph nodes) that are tender to the touch. His abdomen was soft, slightly tender to palpation in the epigastric region but no rebound tenderness or guarding. Bowel sounds were present.

**Laboratory and instrumental investigation: CBC:** WBC 24,3\*109/l

**BBA**: Alanine transaminase 323 U/l, Aspartate transaminase 120 U/l, Glucose 6,8 mmol/l, Lipase 292 U/l, Amylase 232 U/l

**Ultrasound of the abdomen:**  showed the liver, spleen, and gallbladder to be normal in size and echotexture, with no enlargement of the spleen and no gallstones.

The pancreas was diffusely enlarged and heterogeneous. There was an abnormal appearance to the pancreatic neck and discrete enlargement of the head with a different echotexture than the remainder of the pancreas. There was some dilatation of the pancreatic duct in its midportion and some fluid in the upper abdomen and pelvis but no peripancreatic fluid collections.

**QUESTIONS:**

1. Assess investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 3**

**PATIENT**: a 5-year-old girl with complaints of high fever, frequently and small portions urination.

**ANAMNESIS:** she fell ill for today, acutely with fever to 390C, abdominal pain. She became ill after hypothermia, before played on the wet sand. Such symptoms were before, 2 times this year.

**EXAMINATION:** temperature - 37,9 ºC, BP-90/50 mm Hg, HR- 112/min, RR - 28-30 per minute. Skin is clear, dry. The mucous membrane of the mouth is pink. Peripheral lymph nodes were not enlarged, painless on palpation. In lungs vesicular breathing, no wheezing. Heart sounds loud rhythmic. Abdomen was soft, painless in lower area of abdomen. Liver and spleen were not palpable. Renal fist percussion (Pasternatsky's symptom) is positive on the both side of the back.

**Laboratory and instrumental investigation:**

**CBC**: RBC-3,6x1012/L, HGB-112 g/L, WBC-14,5x109/L, NEUT-55%, MONO-6%, LYMPH-37%, EOS- 2%, PLT-350x109/L, ESR-30 mm/h.

**Urine analysis** – specific gravity – 1006, protein – 0,6 g/L, RBC – 20–25 of visual field, WBC – 50-60 of visual area.

**Cystography:** bladder mucosal edema, vascular dilatation with multiple hemorrhages.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 4**

**PATIENT:** a 15-year-old boy with complaints on cloudy urine and flank or abdominal pain.

**ANAMNESIS:** he fell ill for 3 days. This problem appeared for the first time. He has no fever, history of trauma, hypothermia.

**EXAMINATION:** temperature – 36.5 ºC, BP-150/80 mm Hg, HR- 58/min, RR - 16 per minute. Skin is clear, dry, he had face edema and hydrosarca. The mucous membrane of the mouth is pink. Peripheral lymph nodes were not enlarged, painless on palpation. In lungs vesicular breathing, sweet wheezing. Heart sounds loud rhythmic. Abdomen was soft, painless, liver and spleen were not palpable. Renal fist percussion (Pasternatsky's symptom) is negative on the both side of the back. Urination, stool is normal.

**Laboratory and instrumental investigation:**

**CBC**: RBC-4,3x1012/L, HGB-130 g/L, WBC-8,5x109/L, NEUT-55%, MONO-6%, LYMPH-27%, EOS-2%, PLT-250x109/L, ESR-25 mm/h.

**Urine analysis** – specific gravity – 1020, pH, 6.0; protein – 2,66 g/L, RBC – absent, WBC – 0-1 of visual area.

**Abdominal ultrasound:** enlarged both kidney.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 5**

**PATIENT:** a 6-years-old boy with chest pain, headache throbbing pain.

**ANAMNESIS:** the boy was born in a term, аpgar score is 8-9 points. Early anamnesis is normal.

**EXAMINATION:** the temperature is 36.7C0, RR - 18 per min, HR - 96 bpm. BP on hand = 125/60 mm Hg, BP legs = 100/80 mm Hg. Boy had disproportionate figure - well-developed shoulders and upper limbs, reduced development of the lower extremities. Skin of normal color. Femoral pulse detectable, but weakened. In the lungs, vesicular breathing, wheezing not listen. Area of the heart is not changed, palpation-enhanced apical impulse, the borders of the relative cardiac dullness extended to the left. Heart sounds loud, rhythmic, rough systolic murmur in the interscapular region. Shortness of breath, tachycardia are absent. Liver in not enlarged.

**Laboratory and instrumental investigation:**

**CBC**: RBC-6,3x1012/L, HGB-160 g/L, WBC-6,5x109/L, NEUT-57%, MONO-4%, LYMPH-34%, EOS- 5%, PLT-350x109/L, ESR-5 mm/h.

**ECG:** sinus tachycardia 100 in min. Left cardiac electrical axis deviation. ST-T changes in the standard and the left chest leads.

**Echocardiogram:** aorta ascendants - dilatation in gourd-shaped appearance, the inner diameters of the aortic isthmus narrow significantly, the descending aorta is normal.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 6**

**PATIENT:** a 4-year-old boy with chest pain, tachycardia, shortness of breath, low-grade fever.

**ANAMNESIS:** the boy from pregnancy II with the threat of interruption in the trimester I of pregnancy. Symptoms appear two weeks ago after an acute respiratory infection.

**EXAMINATION:** temperature – 37.3 ºC, BP-90/45 mm Hg, HR- 122/min, RR - 32 per minute. Skin and visible mucous membranes are pale, rare petechial rash. In the lungs: breathing hard, no wheezing. Area of the heart is not changed, the border of the relative cardiac dullness extended to the left, heart sounds are muffled, rhythmic, soft diastolic murmur auscultated, worse when standing punctum maximum – apex. The abdomen is painless. Liver +1.0 cm. The spleen is not palpable. Stool and urine output are normal.

**Laboratory and instrumental investigation:**

**CBC:** HGB-120 g/L, RBC-4.5x1012/L, WBC-20×109/L, NEUT-78%, EO-1%, LYMPH-16%, MONO-4%, BASO-1%, ESR-26 mm/h. **Blood cultures:** Staphylococcus aureus.

**ECG:** sinus rhythm 126 in minute, deviation of electric axis to the left; QRS voltage is reduced, diffuse metabolic disturbances in the myocardium.

**Echocardiogram:** a moderate increase in the left ventricular cavity, hypokinesis of ventricular septum, bicuspid aortic valve, valve thickened, on the right aortic valve cusp moving formation with a diameter of 2-3 mm is identified (vegetation), the aortic valve regurgitation 2 +.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Сase 7**

**PATIENT:** a 4-month-old boy with harsh cough, shortness of breath and whistling sound while exhaling went to the doctor.

**ANAMNESIS:** he was nasal congestion and coughing in the last three days. He was treated symptomatically. On the third day, his condition deteriorated rapidly, progressed to cough and appeared noisy breathing.

**EXAMINATION:** the child condition moderate severe. Body temperature is 37.7C0, RR - 64 per min, HR - 140 bpm. Acrocyanosis, widened intercostal space, the baby not calm. The chest is hyperinflated. In auscultation of the lungs, widespread crackles on inspiration, and wheezing marks on expiration in both of the sides were heard. Increase in heart tones. The abdomen was soft, painless. Stool and urination was normal.

**Laboratory and instrumental investigation:**

**CBC**: RBC-4,3x1012/L, HGB-120 g/L, WBC-6,5x109/L, NEUT-55%, MONO-6%, LYMPH-34%, EOS- 5%, PLT-250x109/L, ESR-5 mm/h.

**SaO2** – 92%

**Chest X-ray:** bilateral lung overinflation, and peribronchial thickening of the both lungs.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 8**

**PATIENT:** a 2.5-year-old girl with severe cough and high fever.

**ANAMNESIS:** she was ill for 7 days, became ill after contact with a sick child flu. She fell ill acutely with a rise in body temperature to 38°C, runny nose, and cough, treated at home symptomatically.

Today her condition worsened, increased cough and the temperature went up to 39.0 °C, and child became sluggish, weakness.

**EXAMINATION:** skin is pale, clean. Wet unproductive cough. RR 48 bpm. No dyspnea. Auscultation of the lungs: breathing is harsh; below the angle of the right scapula - diminished breath sounds and wet bubble wheezing was listen. Heart sounds loud, rhythmic. Heart rate: 120 per minute. The abdomen is soft and painless. Liver +1.0 cm. The spleen is not palpable. Stool and urine output are normal.

**Laboratory and instrumental investigation:**

**CBC**: RBC-4,1x1012/L, HGB-120 g/L, WBC-18,5x109/L, NEUT-55%, MONO-6%, LYMPH-37%, EOS- 2%, PLT-250x109/L, ESR-25 mm/h.

**Chest X-rays:** reduced pneumatization by inflammatory infiltration in the projection of the right low lobe. Pulmonary drawing enriched. The shadow of the heart is not displacing. The sinuses are free.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 9**

**PATIENT:** a 2.5-year-old boy with complaints of high fever.

**ANAMNESIS:** he was ill for 2 days. He became ill after contact with his aunt with herpes labialis. He fell ill acutely with a rise in body temperature to 37°C., runny nose, cough. He was treated at home symptomatically.

Today his condition worsened, body temperature 38.0 °C. restless, refuses to eat, vomited once.

**EXAMINATION:** skin is clear, dry, conjunctiva is hyperemic. The mucous membrane of the mouth is bright, hyperemic, edematous. On the mucous membrane of cheeks, gums, tongue, hard and soft palate multiple areas of grouped aphthae, vesicular elements 2-4 mm in diameter. His lips are bright, dry and cracked. Submandibular lymph nodes were palpable, the size of 1.5 \* 1.5 cm, painful. Lungs – harsh breathing, no rales. Heart sounds are loud, rhythmic. The liver is 1 cm below the costal margin, spleen not palpable. Meningeal symptoms are negative. Urine output is reduced.

**Laboratory and instrumental investigation:**

**CBC**: RBC-3,1x1012/L, HGB-110g/L, WBC-4,5x109/L, NEUT-35%, MONO-6%, LYMPH-57%, EOS- 2%, PLT-50x109/L, ESR-15 mm/h.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 10**

**PATIENT:** a 4-months-old boy with complaints of high fever, vomiting, crying.

**ANAMNESIS:** over the past three days, he had nasal congestion and intermittent coughing. He was treated symptomatically. Then his condition quickly deteriorated, body temperature 38.6 С with screaming, repeated vomiting and noisy breathing.

He is from a first pregnancy with preeclampsia in the 2nd trimester and anemia in the 3rd trimester. Before that, his mother had a sore throat and a stuffy nose for a week.

**EXAMINATION:** the child's condition was severe, weakness. Lying on his back with his feet pressed against his stomach, when his feet were straightened, he screamed. Pale skin, hot to the touch, acrocyanosis, cyanosis of the nasolabial triangle. Hypersensitivity, tremor of the hands, chin, navicular retraction of the abdomen, bulging pulsating fontanelle. Pulse 140bpm, respiratory rate – 64/min. The abdomen was soft, on palpation - the baby cries, the stomach is not tensed. The stool was thin, with white lumps and green. Urination was normal. Meningeal signs are positive.

**Laboratory and instrumental investigation:**

**CBC**: RBC-3,3x1012/L, HGB-110 g/L, WBC-20,5x109/L, NEUT-75%, MONO-6%, LYMPH-17%, EOS- 2%, PLT-450x109/L, ESR-55 mm/h.

**Lumbar puncture:** liquid flowed frequent in drops and is cloudy. Cell counts 820/3, neutrophile 90%, lymphocyte 10%, protein 1.8 g/l.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 11**

**PATIENT:** a 4-year-old boy with complaints on common rash, accompanied by fever to 38.80C, pain in the muscles, joints, weakness, lack of appetite.

**ANAMNESIS:** rash appeared three days ago, when the child had a plentiful pink rash on his face, which spread throughout the day throughout the body, the child complained of pain in his legs.

From an anamnesis it is established, that 2 weeks ago it was treated concerning an acute respiratory infection, with a complication - a rhinosinusitis. Outpatient received antibacterial therapy, antipyretics, NSAID

Allergic anamnesis- an allergic reaction to the type of urticaria on the sweet, red products

**EXAMINATION:** the cutaneous pathological process is widespread, symmetrical, with a predominant localization on the skin of the neck, extensor surfaces of the hands, forearms, and shins. The eruptions are represented by multiple erythema, flat papules of rounded shape with clear boundaries, ranging from 0.3 to 1.5 cm, pink in color. At palpation papules are dense. On the periphery of the papules - swollen cushion, in the centre of depression (symptom of the "target"). Pathological elements are prone to fusion with the formation of garlands.

**Laboratory and instrumental investigation:**

**CBC**: RBC 4,4\*1012/l, HGB 123 g/l, PLT 196\*109/l, WBC 6,7\*109/l.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 12**

**PATIENT:** a 3-year-old girl with complaints on nausea, loss of appetite, fever, aching muscles and headache accompanied by a pruritic (itchy) rash that evolves from spots (macules) to bumps (papules) to blisters (vesicles), and eventually into dried crusts over 5–6 days.

**ANAMNESIS:** mother said that two weeks ago a child in the playground was playing with a boy who had vesicles on his skin.

**EXAMINATION:** on the mucous membrane of the oral cavity, labia single erosions, accompanied by sickness, on the skin of the trunk and limbs, multiple papules, vesicles with transparent content with hemorrhagic crust in the center, erosion, covered with serous crusts.

**Laboratory and instrumental investigation:**

**CBC**: RBC- 4,9\*1012/l, HGB- 129 g/l, PLT -251\*109/l, WBC- 7,1\*109/l, NEUT-35%, MONO-1%, LYMPH-64%

Serum was positive for Varicella zoster virus IgM antibody by enzyme immunoassay.

A viral swab of the skin lesions was positive.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What measures should be taken after identifying this disease?
4. What diseases should be differentiated from this disease?
5. Assign treatment.

**Case 13**

**PATIENT:** newborn boy, 1 day of life.

**ANAMNESIS:** the full-term newborn from the third, normal pregnancy and delivery. Baby with birth weight of 3000g, Apgar score 7-8 points.

Mother’s blood is AB (IY) Rh (-). Child’s is (III) Rh (+). An icterus appeared in the first day.

**EXAMINATION:** temperature - 36.7ºC, HR- 164 in min, RR - 48 per minute. Skin is icteric. Mucous membrane is pink, peripheral lymph nodes were no palpable. In lungs puerile respiration, wheezes are not present. Cardiac tones are loud, rhythmic. Abdomen was soft. Liver +4 cm., spleen + 1,5cm. Stool - meconium. Urine is light.

**Laboratory and instrumental investigation:**

**BBA**: Common bilirubin is 200 mcmol/l, Bilirubin indirect fraction is 190 mcmol/l, bilirubin direct is 10 mcmol/l, HGB-160 g/l, reticulocytes 4,4%.

Coumbs test is positive.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 14**

**PATIENT:** premature girl 3 days of life.

**ANAMNESIS:** the newborn was born from 24 years old woman, from I pregnancy, occurring with the URI at 12-13 weeks, polyhydramnios. At 24 weeks - IgM CMV - pos., IgG CMV - pos. Birth at 35 weeks. Birth weight 2030 g, height 43 cm and Apgar score 5/6 points. In the first days of life was noticed an episode of clonic convulsions.

**EXAMINATION:** temperature - 36.6ºC, HR- 160 in min, RR - 46 per minute. Inhibition of the unconditioned reflex activity, hypotonia. Icteric skin, multiple petechial rash on the trunk and extremities. In lungs puerile respiration, no wheezing. Cardiac tones are rhythmic. Abdomen is soft, painless, liver + 4 cm, spleen +1.5 cm. Stool is light green, porridge-like. Enough urine, saturated color.

**Laboratory and instrumental investigation:**

**CBC**: RBC-4,2x1012/L, HGB-130 g/L, WBC-20x109/L, NEUT-22%, MONO-9%, LYMPH-66%, EOS – 3%, PLT-120x109/L, ESR-4 mm/h.

**BBA**: total protein 52g/L (49-69), albumin 25g/L (34-44), GGT 1200U/L (up to 250), ALT 150U/L (40), AST 110U/l (up to 40), alkaline phosphatase 770U/L (150), total bilirubin 150 umol/L (117-68), direct bilirubin 85 umol/L (4,3-12,8), glucose 4.1 mmol/l (1,7-4,7), urea 4.0 mmol/l (2.5-4.5), creatinine 70 mmol/L (35-110), potassium 5.0 mmol/L (4.5 - 6,5), Na 137 mmol/l (135-155), Ca ionized. 1.01 mmol/l (0,93-1,17), Mg 1,2 mmol/l (1.01-1,8).

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 15**

**PATIENT:** 6-year-old boy with complaints jaundice.

**ANAMNESIS:** boy is from a first physiological pregnancy, term delivery, weighing 3400g. Development was normal. Rarely respiratory diseases. My mother said that the child periodically turns yellow, about once or twice a month, but the general condition of the child is satisfactory. The boy's father also periodically appears jaundice sclera

**EXAMINATION:** the general condition of the child is satisfactory. The body temperature was 36,6 º C. Skin is light icteric, clean. The mucous membrane of the mouth is pink. Peripheral lymph nodes were not enlarged, painless on palpation. In lungs vesicular breathing, no wheezing. Heart sounds loud rhythmic. The abdomen was soft and painless. Liver and spleen were not palpable. Stool is normal. Urination is free.

**Laboratory and instrumental investigation:**

**CBC**: RBC-5.5x1012/L, HGB-130 g/L, WBC-5,5x109/L, NEUT- 45%, MONO-4%, LYMPH-48%, EOS- 3%, PLT-350x109/L, ESR-4 mm/h.

**BBA**: Bilirubin - 80 mcmol/l, unconjugated is 70 mcmol/l.

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 16**

**PATIENT:** a 13 years old girl with complaints of dry cough, dyspnea.

**ANAMNESIS:** she fell ill 2 days ago when there was a dry cough, shortness of breath after a walk. The girl from a physiological pregnancy. Early development was normal. With 10 years girl suffers from seasonal allergic rhinitis (pollen allergy), the last exacerbation 2 weeks ago.

**EXAMINATION:** her skin is pale and clear; peripheral lymph nodes are not enlargement, palpation painless, mobile, solitary, dense and elastic in consistency; mucosa of the mouth and throat are pale pink, clear, tonsil - slightly hyperemic. In the lungs, weak breathing, mixed moist and crepitation rales on both sides, mainly in the lower regions of the lungs. RR - 60 per min. Heart sounds are loud, rhythmic, tachycardia of 110 per minute. The abdomen was soft, palpation painless, Liver and spleen were not palpable. Urination is free. Meningeal symptoms are absent.

**Laboratory and instrumental investigation:**

**CBC**: RBC-4,2x1012/L, HGB-126 g/L, WBC-12x109/L, NEUT-53%, MONO-2%, LYMPH-38%, EOS – 7%, PLT-250x109/L, ESR-6 mm/h.

**Chest X-ray:** hyperinflation, more at the top of the both lungs

**IgE** – 400ME, **SaO2** – 94%

**Spirometry:** FVC – 70%, FEV1 - 72%, bronchodilator response -15%

**QUESTIONS:**

1. Assess laboratory investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Case 17**

**PATIENT:** a 3-years-old-boy was brought to hospital with complaints of weight loss, vomiting, weakness, chronic diarrhoea, abdominal distension.

**ANAMNESIS:** similar complaints had begun from five months of his life, when supplementary nutrition (cereal) was started.

**EXAMINATION:** body weight and height were 12.0 kg (-3 SD), 99 cm (-3 SD) respectively. Child was severely undernourished (WHO Criteria).

**Vital signs:** heart rate-126/min, respiratory rate42/min, afebrile, blood pressure 74/40 mm Hg. The subcutaneous fat tissue was markedly decreased. Abdominal distension was observed.

**Laboratory and instrumental investigation:**

**CBC**: RBC 3,2\*1012/l, HGB 92 g/l, MCV 74 fl, MCH 20 pg, MCHC 315 g/l, WBC 5,3\*109/l

**Stool test**: steatorrhea

Tissue transglutaminase immunoglobulin (Ig) A and G are positive.

Antigliadin Ig A and G are positive.

Anti endomysium Ig A is positive.

**Intestinal biopsy:** villous atrophy with hyperplasia of the crypts and increased intraepithelial lymphocyte count.

**QUESTIONS:**

1. Assess investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

**Образец экзаменационного билета**

ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ

«ОРЕНБУРГСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ»

МИНИСТЕРСТВА ЗДРАВООХРАНЕНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ

кафедра «Детских болезней»

направление подготовки (специальность) «Лечебное дело»

дисциплина «Педиатрия»

**ЭКЗАМЕНАЦИОННЫЙ БИЛЕТ 1**

I. **ВАРИАНТ НАБОРА ТЕСТОВЫХ ЗАДАНИЙ В ИС УНИВЕРСИТЕТА**

**II. ТЕОРЕТИЧЕСКИЕ ВОПРОСЫ**

1. Growth: definition, various factors influencing growth, various periods of growth.
2. Congenital hypothyroidism, clinical manifestation, diagnosis, differential diagnosis, treatment, prevention.

**III. ПРАКТИЧЕСКАЯ ЧАСТЬ**

**PATIENT** is a child 6 years old.

**ANAMNESIS:** the early anamnesis is normal. In preventive examinations revealed increased blood pressure to 120/60 mm Hg. The family history - is not burdened. The history of the disease - acute respiratory infections are rare, grown and developed in accordance with age. On exertion - from time to time abdominal pain.

**EXAMINATION:** RR - 24 breaths per minute, HR - 106 beats per minute (on activity RR - 30 per minute, HR - 120 per minute). The disproportionate figure - well-developed shoulders and upper limbs, reduced the development of lower limbs. Complaints of fatigue in the legs when walking. Normal skin color. BP on hands = 120/60 and 123/36 mm Hg, BP on the legs = 100/70 mm Hg. The femoral pulse is barely detectable. In the lungs, vesicular breathing, wheezing not listen. The area of the heart is not changed, palpation- enhanced apical impulse, relative cardiac dullness extended to the left border. Heart sounds loud, rhythmic, noise is not listening. Auscultation is rough systolic murmur in the interscapular region on the back. Shortness of breath, tachycardia are absent. The liver is not increased.

**QUESTIONS:**

1. What is your initial diagnosis?
2. What is the tactic of treatment?

Заведующий кафедрой детских болезней \_\_\_\_\_\_\_\_\_\_\_ (Л.Ю. Попова)

Декан лечебного факультета \_\_\_\_\_\_\_\_\_\_\_ (Д.Н. Лященко)

«1» октября 2018

**Образец зачетного билета**

ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ

«ОРЕНБУРГСКИЙ ГОСУДАРСТВЕННЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ» МИНИСТЕРСТВА ЗДРАВООХРАНЕНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ

кафедра «Детских болезней»

направление подготовки (специальность) «Лечебное дело»

дисциплина «Педиатрия»

**ЗАЧЕТНЫЙ БИЛЕТ №1**

I. **ВАРИАНТ НАБОРА ТЕСТОВЫХ ЗАДАНИЙ В ИС УНИВЕРСИТЕТА**

**II. ТЕОРЕТИЧЕСКИЕ ВОПРОСЫ**

1. Fever: pathophysiology of fever, fever without source.

**III. ПРАКТИЧЕСКАЯ ЧАСТЬ**

**Case**

**PATIENT:** a 4.5-month-old female.

**ANAMNESIS:** the infant was reported to have had 10 watery stools over the previous 24 hours, during which she became quite unsettled, crying a lot, whilst drinking half her usual amount of liquids. There was no history of vomiting.

The infant did not receive a vaccine against rotavirus up until the current hospitalization episode.

**EXAMINATION:** infant with a temperature of 39.9◦C, heart rate between 170 and 190 beats/min, respiratory rate between 40 and 80 breaths/min, blood pressure of 102/55 mmHg.

The child’s weight at admission into hospital was 3990 g, meaning she lost 10% of the previous reported weight.

The skin was pale grey, tenting skin turgor, dry lips and dry buccal mucosa, normal looking eyes but reduced tears, soft fontanelle. The urine output was also decreased.

The abdomen was swollen and slightly painful on palpation, no hepatosplenomegaly.

**Laboratory and instrumental investigation:**

**CBC:** HGB 126 g/L, WBC 16,8\*109/l, NEUT-35%, MONO-1%, LYMPH-64%, C-reactive protein 13 mg/l, Bicarbonate level 8 mmol/l, Sodium 143 mmol/l

Routine stool specimen tested positive for rotavirus antigen. Abdominal and thorax radiographs were normal.

**QUESTIONS:**

1. Assess investigation.
2. What is clinical diagnosis?
3. What diseases should be differentiated from this disease?
4. Assign treatment.

Заведующий кафедрой детских болезней \_\_\_\_\_\_\_\_\_\_\_ (Л.Ю. Попова)

Декан ФИС \_\_\_\_\_\_\_\_\_\_\_ (А.О.Мироничев)

«1» октября 2018

**Таблица соответствия результатов обучения по дисциплине и оценочных материалов, используемых на промежуточной аттестации 5 курс.**

|  |  |  |  |
| --- | --- | --- | --- |
| № | Проверяемая компетенция | Дескриптор | Контрольно-оценочное средство (номер вопроса/практического задания) |
|  | ОПК-1 способностью к оценке морфофункциональных, физиологических состояний и патологических процессов в организме человека для решения профессиональных задач | Знать | вопросы №1, 2, 3, 4, 5, 6, 10, 17, 23, 36, 40, 42, 49, 55, 72, 91, 92, 100, 103, 104, 105, 106, 107, 108, 109. |
| Уметь | практические задания №1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30. |
| Владеть | практические задания №1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30. |
|  | ПК-1 готовностью к сбору и анализу жалоб пациента, данных его анамнеза, результатов осмотра, лабораторных, инструментальных, патолого-анатомических и иных исследований в целях распознавания состояния или установления факта наличия или отсутствия заболевания | Знать | вопросы №7, 8, 9, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 37, 38, 39, 48, 50, 51, 52, 53, 54, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 73, 74, 75, 76, 77, 78, 79, 80, 81, 83, 84, 85, 86, 87, 88, 89, 90, 93, 94, 95, 96, 97, 98, 99, 101, 102. |
| Уметь | практические задания №1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30. |
| Владеть | практические задания №1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30. |
|  | ПК-9 готовностью к ведению и лечению пациентов с различными нозологическими формами в амбулаторных условиях и условиях дневного стационара | Знать | вопросы №11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 24, 25, 26, 29 30, 31, 32, 33, 34, 35, 37, 38, 39, 43, 44, 45, 46, 47, 50, 51, 52, 53, 54, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 69, 70, 71, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 93, 94, 95, 96, 97, 98, 99, 101, 102. |
| Уметь | практические задания №1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30. |
| Владеть | практические задания №1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30. |

**Таблица соответствия результатов обучения по дисциплине и -оценочных материалов, используемых на промежуточной аттестации 6 курс.**

|  |  |  |  |
| --- | --- | --- | --- |
| № | Проверяемая компетенция | Дескриптор | Контрольно-оценочное средство (номер вопроса/практического задания) |
|  | ОПК-1 способностью к оценке морфофункциональных, физиологических состояний и патологических процессов в организме человека для решения профессиональных задач | Знать | вопросы №1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14. |
| Уметь | практические задания № |
| Владеть | практические задания № |
|  | ПК-1 готовностью к сбору и анализу жалоб пациента, данных его анамнеза, результатов осмотра, лабораторных, инструментальных, патолого-анатомических и иных исследований в целях распознавания состояния или установления факта наличия или отсутствия заболевания | Знать | вопросы №1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14. |
| Уметь | практические задания № |
| Владеть | практические задания № |
|  | ПК-9 готовностью к ведению и лечению пациентов с различными нозологическими формами в амбулаторных условиях и условиях дневного стационара | Знать | вопросы №1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14. |
| Уметь | практические задания № |
| Владеть | практические задания № |